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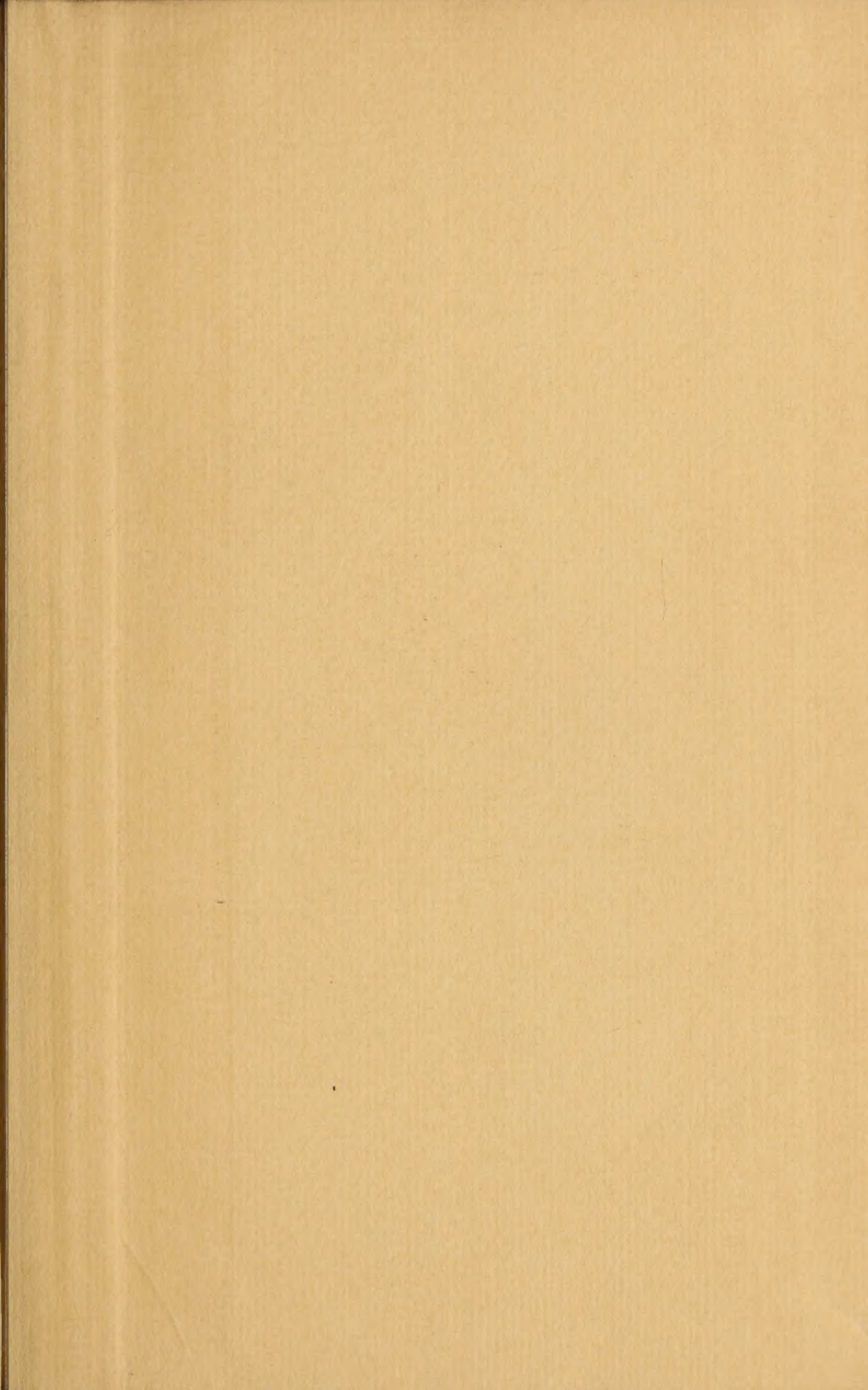
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THE
Alienist and Neurologist

A JOURNAL OF
Scientific, Clinical and Forensic

**NEUROLOGY AND PSYCHOLOGY,
PSYCHIATRY AND NEURIATRY.**

Intended Especially to Subserve the Wants of the
General Practitioner of Medicine.

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CHARLES H. HUGHES, M. D., Editor and Publisher.

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"THE ASEXUALIZATION OF THE UNFIT."*

BY MARTIN W. BARR, M. D.,

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Elwyn, Penn.

ANY faithful student of eugenics will be led to ponder upon the tremendous power of heredity for good or for ill. The possibilities of advance which the generation of pure stock offers to the coming race on the one hand, and, on the other, the impossibility of escape from the fateful effects of baneful transmission bringing unnumbered ills, together with a perpetual retrogression.

This truth, accepted from time immemorial as the law of progress for the lower orders of creation in plant and animal life, finds expression also in the history of certain nations, who have held the maintenance of race purity to be the first principle of true patriotism. The Spartans esteeming the preservation of race, the first principle of national life, exposed their weak younglings to perish; yet Greece was the acknowledged leader in Europe of civilization and all the gentler arts; a civilization that surely finds expression in that one monument which standing alone, as Lecky tells, was honored above all others—an altar dedicated to Pity.

*Read before the 61st Annual Session of the Medical Society of the State of Pennsylvania, Harrisburg, September 28, 1911.

The custom of enforced sterilization is noted in Biblical times, among the ancient Egyptians and later among the Malays, the inhabitants of Borneo and Java, and certain Australian tribes, notably the Kalkadoons, and also the American Indians.

Shall not we then, claiming advanced civilization, be as wise in our generation as were those Tribal fathers, and to the question, who shall be castrated? reply, "All who are unfit for citizenship or unable to produce healthy offspring."

Boetius states that in Scotland were any insane, idiotic, epileptic, leprous or afflicted with disease likely to be transmitted, "he was instantly gelded, and if a woman, she was kept from all intercourse with men."

Religious societies accepting purity as their first law are found in all ages and all lands; notably the "White Doves," ("The Skoptzies") of Russia who castrate by thousands; and not alone in the East have existed Eunuchs for the kingdom of heaven's sake.

This implicit belief in transmitted qualities is to be noted among those in close touch with nature, in the work of farm, orchard and garden; and the results obtained through the persistent discarding of imperfect stock and the amalgamation of good, so observable in the wonderful variety of grains, fruit and flowers are more than equalled in the high grades of stock of all kinds from hogs to horses.

What stock raiser having once attained this would permit a base intermixture of breeds; and yet, what is man that we should be thus unmindful of him, and the son of man that he should be so disregarded? For this very stock breeder, for lack of the sustaining arm of law, might be forced to accept in his family what he would not tolerate in his piggyery.

We sequestrate insanity and quarantine cholera, yet we allow defectives responding only to exaggerated, unrestrained, sexual impulses to infuse their poison, and to permeate with disease and defect, with filthy and criminal instincts, generations of human beings. Witness the notorious Jukes family—over 1,200 defectives, descendants of five degenerate sisters—and the so-called tribe of Ishmael, which within fifty years poured over many states a flood of more than 5,000 degenerates.

A study of, and long experience with, degeneracy discovers sexual impulses almost always exaggerated, and associated with defective will-power, absence of self-control and the moral sense often absolutely lacking. In this condition the defective is a mere animal preying upon himself and upon society and each and both demand protection under law.

To-day, in Pennsylvania alone, there are 10,000 cases of avowed imbecility, and of these but 3,500 are sequestered. As sexual impulses dominate their lives, the removal of this excitation, as has been proven, not only makes them more tractable, as does gelding for the ox, but the general health improves, and nervous disorders, to which many are subject, become more amenable to treatment; therefore, far from being an injury, the slight and nearly painless operation required, improves physical vigor and they become contented and happy. Intelligent parents unhesitatingly accede to such suggestion as a means of safe-guarding alike the family and the individual, preserving the purity of good stock while eliminating the bad, and insuring always the moral and physical improvement and well-being of the individual. The state, to these its irresponsible wards who are wholly and for all time dependent, holds or should hold a similar relation, and would but exercise a true and wise paternalism in forbidding to them the act of procreation. Moreover, many high-grade imbeciles, recognizing a slavery from which they are powerless to escape, have plead that the remedy be applied that would insure them from certain degeneration into vice and crime. The well-known fact that exaggerated sexuality is the marked characteristic of the imbecile would lead to a logical deduction that rapists and prostitutes belong largely to this class. Such unfortunates, absolutely destitute of the moral sense, cannot be said to be infringers of a moral code of which they can have not the least conception. Logically, therefore, the right of such individuals is that they neither be classed with nor be punished as criminals; although, the safety of society demands their sequestration and prevention of increase. Then, surely, here might the state emulate the wisdom of the Greeks and find no more fitting place for her altar of pity; for we claim that in withholding the sacred office of parenthood from these "perpetual

children," incapable of assuming its responsibilities, she will best protect the innocent from being the victim of the vicious; will prevent a rapid and appalling increase of her hopelessly irresponsible and dependent classes; and, furthermore, in protecting her normal citizens from the contamination of degenerate stock, she will open the road for the onward march to the attainment of true race ideals.

How, in the light of all the teaching that nature, history and experience supplies, anyone can object to the unsexing of the unfit as the only assurance for the survival of the fittest, on the grounds of interference with individual rights, is inconceivable. Rights! We hear nothing of rights when the food of pauper emigrants is seized and thrown overboard; still less when hundreds of quarts of damaged milk are poured into sewers. There, as in the quarantine of disease, it is openly declared that the right of the individual must be sacrificed to the good of the community.

The family histories, collated in the institutions and hospitals of our land, form in themselves a library of tragedies which should convince the most skeptical of the magnitude of race suicide, increasing with each generation. My own study and observation alone, of over 4,000 degenerates, shows such examples as: A man aged 38 years, the father of 19 defective children, all living, he and his wife both under par mentally; as was another couple with 9 imbecile children; and an idiot woman with 7 idiot children. A forcible instance is that of a man with two daughters and one illegitimate grandchild, all feeble-minded. The father served as a jurymen, and shortly after, application was made for his admission to the training school for defectives of which I am in charge. One might say there was a clash of rights in this instance. Which? Is the individual or the public to be considered?

I could name a family, one of the proudest in the land, where there are five children, an aunt and two uncles all feeble-minded.

Yet another, which in seven generations numbering some 138 individuals, records 10 still-born children (premature births), 16 insane, 7 imbeciles, 3 epileptics and 32 with mental peculiarities so pronounced as to occasion remark. Of the

138, there remain 80 apparently normal, who are nevertheless hopeless slaves of a neurotic heredity, direct or collateral.

In a study of 15 imbecile girls, 3 were recognized prostitutes; 9 had each 1 illegitimate child (2 being the result of incestuous intercourse with brothers;) 1 had 2; 2 epileptics had, the one 3, and the other 4 idiot children.

Four feeble-minded women had 40 illegitimate children.

A feeble-minded woman living in an almshouse since early childhood, allowed to go out to service periodically, had given birth to 6 illegitimate children, all inheriting her defect.

An imbecile drunkard is the father of 3 feeble-minded children. The daughter, seduced before the age of 16, gave birth to an idiot child; one son is a harmless imbecile, but the other is a moral imbecile, a sexual pervert, a thief on the streets, and a pyromaniac, firing in sheer wantonness, a large mill property.

Another shows the entire family for 3 generations below normal. Father, mother, mother's sister and father's uncle, all imbecile. Five children feeble-minded. One girl had a proposal of marriage, and one boy is married to a feeble-minded girl.

One insane woman, whose brother and sister committed suicide, had five sons. The oldest feeble-minded, a drunkard and hobo, had one son, a criminal. The second son, insane, had 3 imbecile children. The third, an insane epileptic, had 3 imbecile sons, one of whom was an epileptic. The fourth son was insane. The fifth apparently normal, had a moral imbecile son and an epileptic daughter.

In these cases do we note the right of the individual to bless or to curse the race; and where may we trace the beneficence of law protecting him from society and society from him? Echo answers! "The rights of the individual must be maintained. Who dare tamper with them?" cry some of our legislators. Yes, he must be allowed free exercise even if he does poison the life-blood of his neighbor's family with his vile infusion. Yet we sometimes think would that we could dump into sewers something more than impure milk!

A comparison of statistics, carefully compiled by experts through a century of observation and study of causes of de-

generacy, shows heredity a potent factor among all races and, among Anglo-Saxons, the primary cause. In America the direct transmission of imbecility has proven unfailing, and its startling increase simply the natural result of non-prohibition by law.

In my individual study of 4,050 cases of imbecility, I find 2,651 or 65.45 per cent caused by malign heredities; and of these 1,030 or 25.43 per cent are due to a direct inheritance of idiocy, and 280 or 6.91 per cent to insanity.

That the experiment of stringent marriage laws in some countries is unavailing to meet this contingent is self-evident; as are also the efforts of moral and religious codes to control irresponsibles who, victims of exaggerated sexualism, can recognize no higher impulse. This having been proven, the logical sequence of such experience is that the only practical means of arrest is in the removal of sexual desire; and that must be done at any cost, since the destruction of powers of procreation by the imbecilic individual has become the paramount obligation of law in the protection alike of the individual and the race.

This purging of the body socialistic and the maintenance of race purity may only be accomplished by the power of common law and the constant supervision by its emissaries of schools and families; so that neither poor nor rich shall contribute aught to mar the common weal.

And why not? Surely such safe-guarding as shall license sound and clean procreators is as necessary as the pure food laws that insure healthful feeding of the race, if indeed not more so.

The first step in this direction, that of separation, has already been taken in the establishment of backward classes in the public schools. Such grouping cannot but facilitate intelligent inspection, and the special training given arrest rapid deterioration of the simply backward. But, on the other hand, it must be understood that of the so-called backward at least three-fifths are irretrievably defective. For these, mere mental acquirements will but constitute a mask preventing recognition. It is, therefore, of primary importance to the race that this incurable condition, after a reasonable period of trial, be

determined by experts, and that all hopeless defectives so adjudged by them be duly asexualized. Rendered thus harmless to society, special training benefitting the individual may be pursued on any lines which inherent capacity, circumstance, or the needs of his community may indicate. This massing into communities or colonies has already proven the best substitute for that family life which each has been forced to forfeit. Not this alone, but insuring for the cunning, moral imbecile, devoid of the moral sense, protection from temptation, and also safe-guarding the merely weak-minded who, out in the world, would prove a victim or a ready tool for the master-mind devising ill. Indeed, this first step of separation must find its only logical conclusion in asexualization and permanent sequestration, if it is to be of any permanent value to either the individual or the race.

The unrecognized defectives (contributing so largely today to the records of enfeebled degenerate heredity), are also swelling numbers in criminal courts, in our houses of correction, jails, penitentiaries and insane hospitals.

But the time of cleansing has come. The movement is already on foot, and Pennsylvania we may well be proud to reckon among the leaders. Thrice by *vox populi* has she responded to the acknowledged need, and each time been suppressed by a single voice; the veto of two governors (1909-1905,) and the influence of one legislator (1911). She has this record, at least, if not the affirmative action of her four sister states, Indiana (1907), California, Oregon and Connecticut (1909,) who recognizing by Legislative act the only remedy to stem the torrent of degeneracy have authorized the asexualization of confirmed criminals, idiots, imbeciles and rapists.

Now as to the *modus operandi*. Much prejudice and misunderstanding on the part of the general public might be removed, could it be made clear that the operations are perfectly simple, involving no danger and almost no discomfort.

It is not always essential that testicles and ovaries be removed, but I prefer it, as giving absolute security—security beyond a peradventure, and when castration and oophorectomy are performed in the young, desire almost entirely ceases, or is at least held in reasonable abeyance.

If, for sentimental reasons, the removal of the testes and ovaries will not be considered, ligation of the spermatic cord or vasectomy in the male and fallocotomy or tuberectomy in the female, may be performed through the vagina. After these latter operations the organs do not wither and atrophy, collateral circulation being established, and there remains sexual desire and sexual power, but inability to impregnate or to conceive.

I have been told, however, by a distinguished surgeon that in one case a reunion of the divided ends of the vas deferens was effected and that the subject, a vigorous man, afterwards begat three healthy children.

In such cases, therefore, the race receives only partial protection, while individuals, remaining victims to some extent of exaggerated impulses, may as rapists or harlots, still pollute society, even should they not reproduce their kind.

I have followed, most interestedly, the castration of 84 boys and the removal of the ovaries of 116 women, and have been advised that the improvement in every case has been marked.

At the Indiana Reformatory at Jeffersonville, Dr. Harry C. Sharp has vasectomied some 500 males (176 operated upon at their own request) and in each and every case the results have been most gratifying.

In a very recent personal study of 7 oophorectomies, 5 vasectomies and 13 castrations, there has been decided mental, moral and physical improvement. In every case there was advance, noticeably in the castrations; both sexes becoming brighter mentally and dispositions more amiable.

In the vasectomied the sexual desires are held in abeyance, although masturbation is occasional. The semen, however, is innocuous and under the microscope shows no spermatozoa. On the whole the individual is more tractable, and there is a marked change for the better in both behavior and disposition.

I am firmly convinced that if the many who decry and protest against sterilization, could be brought into direct contact with warped mentalities as are we who live among them, they would come over to our side; just as have those who, in theory opposed to lynching, when their own families are defiled

at once become enthusiastic advocates of lynch law.

We all need to personally realize and have things brought home to us; for how slow humans are to learn a lesson unenforced by pain. It is, therefore, to be hoped that the Legislature of Pennsylvania will for the fourth time enact, and the Governor at last affirm, a decree of protection of society; so that the defective irresponsible shall live out his little day of happiness within and sunshine without, rather than in misery and darkness behind prison walls.

It may doubtless be urged by some that such a law might be abused. There is no reason, however, why it should not be so safe-guarded as to achieve the greatest good to the greatest number without abuse. In no case would I advise the indiscriminate use of the knife, nor a license for physicians in general practice to act without proper authority.

The operation should be permissible only after ample period for study of and testing by accredited alienists and surgeons, and this, as I have stated, is best attained in the grouping of numbers by separation and segregation.

"To be a good animal is the first requisite to success in life, and to be a nation of good animals is the first condition to national prosperity," says Herbert Spencer. Later when the world has noted the results of such wise legislation; in an uncontaminated generation, unfettered by accumulated inherited weaknesses, pressing forward to high ideals; again the *vox populi* may demand another "union of states," in a patriotism based upon a noble culture of racial purity; recognizing Lord Beaconsfield's dictum that "The public health is the foundation on which reposes the happiness of the people and the power of a country. The care of the public health is the first duty of a statesman."

ASEXUALIZATION OF THE UNFIT.*

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ABUNDANT and convincing reasons are on record in favor of mercifully and scientifically checking the propagation of the unfit. Now and then asexualization is opposed. Legislation is too often thwarted.

The only forceful reasons urged against this eminently humanitarian and economic procedure seem based on shallow sentimentality; on pleas for individual freedom to do as one may choose or desire. The same arguments may be used equally well to liberalize privileges of choice and action in many directions already determined to be prejudicial to communal interests, even dangerous to ourselves and our children. Among them are unbridled divorce, prostitution, "free love" and such like encouragements of the lower animal impulses. Sex impulses are implanted in human beings for the wisest and best of reasons, no less than the maintenance and propagation of the race. Like all dominant primitive impulses in man, the reasoning animal, they must be safeguarded by intelligent restraint; by normal inhibitions. Society has gradually built up customs, habitudes, folk-ways, etc., which becoming instinctive, materially aid the exercise of self-restraint.

All religions worthy the name teach great moral truths, of which the basis is the significance of self-restraint and other elemental principles of sociologic physiology. Among the most forceful principles inculcated are high standards of thought and action, making for the betterment of the community and the race. Penalties of one kind or another are promised for those who transgress these economic and physiologic laws.

The simplest legal definition of a responsible man or woman is one possessing the ability to realize the significance of moral

*Opening discussion on the paper of Dr. Martin W. Barr, (same title,) read before the State Medical Society of Penn., 1911.

considerations. If the individual is shown by the evidence to be unable to appreciate the difference between primitive principles of right and wrong action, he or she is adjudged a lunatic and is no longer permitted freedom of choice or action. Restraint is applied in proportion to the degree and kind of the mental disability determined.

In every community there are many semi-insane, imbecile or otherwise unfit individuals who enjoy the fullest liberty of action, who may or may not have come under suspicion of mental alienation, yet are wholly defective in the one essential guiding quality of self-restraint, viz.: in the genital sphere. Sex impulses at short range are despotic. From the licentious acts of such persons the whole community perpetually suffers. Not only is there peril for all from the whole realm of venereal disease, endangering the integrity of health, of legitimacy, of life itself; but the whole social fabric may and does thereby suffer. The sane, the wholesome-minded, the frugal of the community must not only thus run perpetual risks, but are compelled to pay for the maintenance of these incompetents.

Every community includes a large number of wholly incompetent individuals, showing such evident defects of mind or morals, or both, that their mentality comes under suspicion by those who are barely able to judge, or wholly unwilling to believe plain facts. Many of these are sheltered, screened, protected by blind love, or by reason of other selfish considerations, especially political schemers. Parental safe-guards may or may not be exerted over these unfortunates.

It is obvious that no good whatever can come of permitting freedom of action to such beings. They are a perpetual and frightful menace to all decent citizens, especially to the young and unsuspecting of both sexes. A little alcohol wholly dethrones what remnant of mental poise they may possess. Yet the law says they shall enjoy absolute freedom until they commit some overt act which brings the offender within the artificial and fluctuating category of offenses justifying commitment.

Painful it is to contemplate a state of society which invites the blackest horrors to fall upon innocent members, and is only willing to protect itself after the blow has fallen.

There remains to mention a few degenerate human creatures, so low in the phylogenetic scale, so like unto no being made in God's image, that they are a burden to themselves, a stain upon their ancestry, a blight upon the good green earth, a perpetual horror and reproach to all who see them, cumbering the ground. They are lower than the beasts, far lower than the mangiest cur, the wretchedest abandoned cat.

Animated by archaic notions of sentimentality, morbid soft-heartedness, of over-wrought, vitiated philanthropy and blind to teratologic truths, there are those who insist that these derelicts shall be carefully nurtured and permitted to come freely in contact with those of the opposite sex, even encouraged to marry and beget even worse than they. Mrs. Grundy is a great force in the land. We are still influenced by what she declares to be proper, in spite of overwhelming scientific or economic evidence to the contrary.

It has been demonstrated beyond dispute that:

(1) Many of these unfortunate beings are capable of at least a small measure of improvement, especially by asexualization.

(2) That wheresoever they come in contact with those of the opposite sex they have no power of controlling the sexual impulse.

(3) The offspring of such are almost invariably as bad, or worse than themselves.

In the light of these facts can we assume the responsibility of denying these degenerates the *privileges* of asexualization?

It has been shown repeatedly that glimmerings of a better self frequently impel individuals, imbecile sexual perverts and criminal insane, to recognize the beneficence of this simple procedure and beg it for themselves.

Finally: a legislator or governor who would block the way to shutting the door on the flood of putrefying humanity which now flows unchecked into the clean breast of every community is taking a large and grave responsibility upon his shoulders. He must answer for his acts, not alone to his soft-hearted constituents, but to the beneficent and wise God before whom he must ultimately appear.

REAL AND PSEUDO-EXPERT MEDICAL TESTIMONY BEFORE COURTS AND JURIES.¹

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Mem. Chicago Academy of Medicine, Ex. Pres. Miss. Val. Med.
Assn., Member Amer. Medico Psycholog. Assn., Active Mem-
ber of A. M. A. and other home Med. Assn's., Author of
Neurological Practice of Medicine and many Mono-
graphs in Psych., Founder and Editor of *The Alien-
ist and Neurologist*, etc., etc., etc.

NO more pitiable, and often cruel and criminal in consequence, picture presents to the public and to the shame of the profession, before courts and juries by the profession, than a medical man without complete knowledge of his subject, viz: the pseudo self-asserting medical expert on the witness stand, in an important cause, when property, character, liberty or life are involved in the issue. Always of significance, but especially grave when involving questions of right or wrong or issues of liberty or life, as in matters of crime or cerebro-mental integrity and graver forms of insanity, the moral imbecile, the mild mannered insane, the marked but periodically convulsed maniac, such as the psychically convulsed larvated epileptic homicide, whose crime is masked in nocturnal malady of which the average physician without wide experience in alienism and the artful simulation of mental malady knows often less than he should.

¹ This paper was designed to be read in brief before the Miss. Val. Medical Assn. held at Nashville, Tenn., Oct. 19, 1911, but the author was unavoidably absent.

MECONOPHAGY OR THE OPIUM HABIT—NARCOMANIA.

For instance, the first case happening under my personal observation, (and I shall confine this contribution mainly to personal experience only), involved a deposition as superintendent and medical chief of the Missouri State Hospital for the Insane at Fulton, Missouri, now designated Hospital No. 1, forty years or more ago, on the question of the opium habit, the condition of mind it engendered, testamentary capacity under its influence and the state of mind under sudden withdrawal of the drug from the system and its enforced abstinence therefrom for a time, (a cruelty to the unfortunate habituate of opium or its derivatives). The case should be found in Missouri revised statutes for the latter part of the eighteen hundred and sixtieth to seventieth decade. It is known as the Cowgill will case, where an aged man deceased, but in the latter part of his lifetime a slave to morphine, brought about by unauthorized self-prescribed and druggist-aided renewal of a morphine prescription hypodermically administered by his nurse, the morphine being denied him except in certain prescribed quantities and at times entirely interdicted by the family and the family physician.

This gentleman's last will and testament mainly ignored his surviving family and favored to an extreme degree the nurse who won his gratitude and reward by supplying the morbid demand of his system which his family ignored and his physician likewise. For most victims of this terrible habit should be let down or rather lifted out of the depths of the misery of sudden withdrawal gradually and by skillfully substituted and chemical antitoxic support to their damaged cerebro-spinal centers. For, as Burns said of toothache, "it is the hell of all diseases," and its victims, as De Quincy described in his Confessions of an Opium Eater from his own personal experience, "the opium habituate, after its abrupt withdrawal, suffers an Iliad of woes." He is not his normal self. His brain weakens, the psychic neurones become unstable, causing delusions and dreads of horrible calamity, wrong imagings, morbid apprehensions. Exhaustive sweatings, fulgurating pains and colliquative diarrhoeas occur while nature is eliminating

the specific and the ptomaines. Tremors and restlessness of mind and body. The brain, in fact the entire neuraxis, is often in fatal morbid disharmony. Depression and collapse of the cerebro-spinal nervous system succeed and supplant the bonhomie and exalted imagination and apparent neurotic en-tonement and tranquility.

This case ended on the first trial against the validity of the will and bequest to the nurse, mainly on my testimony that, under the circumstances of family antagonism and withdrawal of the accustomed drug, the victim's meconomania (opium habit, not opium fiendishness) these unfortunates under prolonged abstention, would resort to any means or subterfuge, even to lying in the most truthful or stealing in the normally honest, the selling of virtue even by the naturally virtuous, or other crimes and misdemeanors out of harmony with the individual's natural character, to get the accustomed drug.

The opiophagist may be sane when the drug is moderately in his blood, but he is ordinarily not rational when it is out for a considerable time, when its impress is suddenly and completely withdrawn from the brain, just as the lower centers of the cerebro-spinal axis and sympathetic systems work wrong in their governmental regulation movement of the brain and other viscera. In this trial the will was not sustained, but in a subsequent one, without right expert testimony, it was reversed.

Great harm is done the unfortunate slaves of opium or its salts, sometimes even by the medical profession neglecting to restrict and limit the use of morphia, laudanum and other salts and preparations of opium (not so much now as in the past), but greater harm is done them often by police courts and policemen through suddenly enforced deprivation and deafness to their pleadings; for "a hair of the dog is good for the bite" and a moderate drug support and a gradual withdrawal are humane even for criminals. A whole volume of my personal experience might be here recorded. I will only note that one of my patients came to me one morning asserting that he had taken only nine grains in three grain doses of sulphate of morphia, whereas he had taken three ten grain doses hypodermically the day before. Before night he

was so delirious that he did not know his own name or where he came from. It required about five days of gradual morphia restoration to get his blood and nerve centers in the state of opium surcharge sufficient to bring the appearance of rationality back to him.

When we got him up to ten grains ter die he confessed he had habitually taken ten grains three times daily, but thought that would make no difference with my treatment. After this, in the right light as to dosage previously taken, he was treated to recovery.

I may say here that statements, under the blood and brain's need of the drug, are not reliable and one who treats opium victims should have them under constant surveillance and control and as a rule should have little else to do than attend them. (I am not taking them for treatment now, preferring to advise institutional treatment.) I then had such a place for these and alcoholics. The care of them combined with the practice I was doing them, nearly broke my health and I have since turned them over to others. But I acquired the experience such as I here relate and much more of a similar character.

I have known of virtuous women forgetting what virtue and feminine honor are and high-minded, noble and truthful men to fall from the pedestal of honor, nobility and truthfulness of character of their better days into depths of depravity and degradation under opium's fatal morality enthralling power as the often to be pitied alcoholic drunkard does. The same is true of the cocaine and chloral intemperate habitue, though the degradation of these latter, not so fatally complete, is none the less enthralling and in extreme degrees of their enthralling power alike to be commiserated and to a degree extenuated in case of crime.

The next case I have to relate is one of the killing by an elbow joint wounded toxhemic confederate ex-soldier not fully recovered from blood poisoning, who under the insanity engendered condition of a blood-poisoned brain, fatally shot an old friend who declined to change a five dollar bill for him. He was a farmer and some years after the civil war was over and swords had been substituted by plowshares and pruning

knives, would leave his plow suddenly and run into the house for his gun crying "the Federals are coming." This outcry led to a brilliant diagnosis by one of the local experts, a pompous medical gentleman of the old school, confident in his diagnostic ability and proclaiming it to the court while he handled a large gold-headed cane which fitly matched his confident manner and double-breasted buttoned up coat.

When asked to define this form of mental derangement he answered, with no lack of assurance, "I would call it Federal insanity," sir. The prisoner was acquitted and the doctor appeared well pleased with the judicial proclamation of the fact based on his expert testimony.

The next case was that of a man whose wife divorced him and married another, causing him, through worry and prolonged insomnia, to become erotomaniacal, so that he continually pursued her, following her in the streets and everywhere even to the door of her sleeping apartments, where he would lie down and await her awakening with the hope of meeting her with a pleading to return to him. On one occasion he went to a dentist, taking from him a decayed molar tooth he had extracted from her, crunching it and swallowing it. Notwithstanding this and other insane vagaries associated with the often physical symptoms of brain disorder, profound sleeplessness, constant nervous agitation, constipation, capricious appetite, indifference to food, irregular and rapid heart action (tachycardia) this man was at the first trial convicted. A second trial was secured on the ground that the jury panel was defective, the jury not being summoned in their numerical order. This final trial resulted in acquittal on the ground of insanity. The man was taken out of the United States to a foreign asylum for the insane and died of terminal dementia.

There are many blood contaminated states, autotoxically engendered and poisoned from without, causing vaso-motor paralysis or arteriole spasm and perverting the mentality of which we can not in this paper take minute account. Among them are the toxhemias of epilepsy, puerperal convulsion and alcoholic poison states whence arteriole spasms, paresis, psychic convulsion and uncontrollable impulses to, and accomplishments of violence of speech or action, or both, form a mental charac-

ter changed from normal to abnormal. The infanticide of immediately post partum mothers, the homicides of the epileptic alternate equivalent, psychic homicidal or otherwise violent furor epilepticus and psychic ambulatory epileptic automatism and the trance states of the brain poisoned and psychically perverted of the profoundly alcoholized are examples, but we can not dwell on these.

OTHER MORBID BRAIN STATES BEFORE THE LAW.

Then there are other brain oppressed insanity engendering states to be studied and differentiated from non-insane diseased brain, such as abscesses, cerebral emboli, thrombi, tumors, apoplectic clots, aneurisms, hydrocephalic and blood brain pressures, microscopic alterations in meninges, circulation, ventricular ependymas and cortex psychic areas, etc., which may or may not cause insanity. These are to be estimated as to their causative value in diagnosis by the alienist expert and also the many extra cerebral visceral influences on the brain as causative functional insane disorder to be considered. Brain strain engrafted upon profound neurasthenia causing psychasthenic perversion also.

Some of these cases are obscure and require long, patient and discriminating observation, based upon accurate psychiatric experience. Esquirol thought one should live with the insane to rightly comprehend them, but the observer should at least be an accurate clinical psychiatrist in order to rightly testify concerning them.

In point is the case of B. F. C., a young man, a somewhat imbecile student, who came under my observation after the shooting of his mother's coachman at the suggestion of his uncle at the breakfast table.

The young man had just come home from school at Heidelberg, markedly egoistic. On his arrival he put up for a few days at a first-class hostelry in St. Louis, sent his card home announcing his arrival and invited his people to call on him. I have reported this case before. I observed this young man and conversed with him on eighteen different occasions and found him self-elated, markedly egoistic and sleepless. For several nights he paced his cell all night. He was greatly

constipated, his pulse irregular, his conversation without remorse and conduct and speech changed in contrast with his normal natural character; his mind was feeble and imbecile. His case would be classed by English alienists as hebephrenia and by the German psychiaters as dementia praecox. After recommending a medical commission of inquiry as to his sanity, which was called by the presiding judge, he was declared insane, committed and passed into profound dementia. He was finally sent back to his family where he died at home demented. His was the sort of case that would have been and was considered as not insane.

EPILEPTIC INSANITY AND THE PSYCHOPATHY OF THE INTER-EPILEPTIC INTERVAL.

The paroxysmally violent from traumatic or idiopathic epilepsy often appear so sound of mind at intervals that the inexpert confidently declare them to be sane, but passionately ungovernable. An epileptic patient in an interval of this psychic fury attempted to kill his wife. He was declared insane and sent to me. His skull had been fractured and epilepsy followed. In the intervals of his paroxysms he was mild and genial of manner and so fully appreciative of his condition that he pleaded for a craniotomy, saying he would rather die than to go back home with his malady unrelieved. The injury to his brain was somewhat chronic. Yielding to his really rational importunities I trephined him, removing three spiculae of bone, one a conical spur imbedded in the summit of the middle or second frontal convolution. The two other speculae had rounded and were only superficially imbedded. The penetrating speculae was smooth also, but on removing it, the brain surface and meninges were slightly lacerated. He went immediately into a convulsion. One convulsion being succeeded by another, he went into status epilepticus and died comatose after a succession of convulsions.

This man would appear rational in day time nearly a month at a time, having an occasional day time seizure in the intervals substitutive of the monthly night paroxysm and at rare intervals, preceding the major seizure, would occur slight and transient vertiginous manifestations.

Had this man in the state of apparent sanity had a psychic homicidal spasm, some medical men of good general ability, even such as would be acceptable as psychological experts in court, might say he knew what he was doing at the time and on such testimony criminal conviction might follow, though the verdict would in fact be, if not reversed by a higher court or declared against the evidence and remanded, an undesigned judicial murder. Courts are not infallible in ruling in medico-legal cases.

INFLUENCE IN AND RELATIONS OF THE PSYCHOPATHIC AND NEUROPATHIC CONSTITUTION.

When the psychopathic diathesis from closely related ancestry pervades a family, as from father or mother, or is atavically descended upon an individual from remoter kindred, like grandmother or grandfather, or from uncles or aunts or brothers or sisters insane, including profound dipsomania or drink thralldom to the extent of alcoholic brain disease, this may impair to the degree of resistlessness of the drink impulse, a comparatively slight cause may develop an insane delirium of more or less gravity, sometimes passing into serious insanity. The virus or microbic toxhemia of a fever may make insanity in such, while the non-neuropathically endowed escape the grave morbid calamity, even under greater toxhemic brain assault or direct brain violence. Maudsley thinks this insane brain craving for alcohol and the display of delirious change of character under alcoholic stimulation is an evidence of the existence of the insane temperament. In all of Job's calamities, not only his moral but his physical brain integrity was preserved to him because of his inherent brain and mind stability. He had the *mens sana in corpore sano* to perfection, just as some have in our day even under great and penetrating traumatic violence. There are some whose minds continue sound with bullets or saber thrusts in the brain, as Dr. Harlow's patient, Pheneas P. Gage, with and after the tamping iron blast penetration from the ramus of the jaw through the brain and out at or anterior to the frontal sagittal suture junction.

A married woman, loving and faithful towards a faithless, dissolute and diseased husband, false to his marital vows, cold, violent and neglectful of her, insisting on her inducing miscarriage, threatening her with abandonment and death and consorting with women away from home and communicating to her a gonorrhoea, admitting his infidelity, abstaining from conjugal commerce with her for many weeks, through long anxiety and many long night watches for his coming when he came not to her, and withal enciente, becomes brain exhausted from the worry, grief, anxiety and insomnia, melancholic, nosomaniacal and transitorily insane. In a state of frenzy she shoots her husband. A number of young and inexperienced court experts pronounce her sane because she knew what she did and after the deed in a period of relief and satisfaction gives a fairly correct account of the deed and shows no remorse, makes no excuses or explanations.

This woman might have gone to the gallows or the electric chair but for a more rational expert explanation of the case. Now neglect, rebuff, scorn and violence had brought on the loss of sleep, of appetite and flesh, the constipation and the near febrile unrequited erotomania and uncontrollable violent impulse that sent the fatal bullet into her faithless, brain and heart breaking husband's body.

Added to this was the hystero-psychic revulsion of uterogestation, under these circumstances adverse to mental equilibrium.

Cases like this are not what they seem to the ordinary medical man who looks for profounder mental conditions and more patently and organically damaged states of brain to constitute insanity. It is not necessary that "the life of all the blood be touched" so completely that the idle delirious comments of the brain "portend the ending of mortality" as in pre-moribund states of typhus, typhoid or other blood dissolving states approaching to fever to constitute those profound emotional states of brain and mind that end in suddenly impelled homicide or violent spasms of the mind, like pyromania, kleptomania and other morbid obsessions and propulsions.

It is not always necessary to precisely place or category

the form of insanity as defined in the nomenclature of alienism. It may be neither manic depressive insanity, plain melancholia, nor melancholia agitata, though these states of brain and associate mind underlie much of mental aberration, paresis or dementia praecox, primary or terminal and secondary, plain or undefinable mania. If we find disease involving the brain or its vessels or serum supply or meninges or ventricles to be the cause we may pronounce insanity whether able to category and diagnose the precise cerebral nosology or not. But disease, deranging brain and mind in thought, feeling or emotion or movement and changing auto-normal character expression being the basis, constitutes true insanity.

There are many forms of disease engendering morbid mental expression and outburst not yet definitely defined or classified. Some of these include some of the unwritten law states of mental disturbance though not all of them, for some are brutal, vengeful, savage, reckless, pitiless, satanic murderers deserving only the prompt electric chair or scaffold. The task of the expert here is to rightly discriminate and diagnosticate rightly between resistlessly impelling disease and cruel unrestrained passion consciously and criminally planned and executed.

A young man* in the employ of a bank is summarily discharged. Shortly after he meets the president on a much-frequented downtown street corner and shoots him to death. He may or may not have taken a drink of whiskey or have been addicted to the social glass, for in those days drinking was more common in business hours and between than now, but the facts concerning this were not brought out. He was in apparent good health. But who knows how much of insomnia and altered brain vaso-motor disturbance and resistless mind disorder from the shock and shame of his summary dismissal worried him or how much of normal unrestrained vengeful passion was there. Only a patient, tedious expert psychological analysis combined with expert power of psychic discrimination and more of data as to existence of or non-existence of brain involving and character changing disease

* Thornton, versus Charless, St. Louis.

could decide. For only thus is insanity, as distinct from normal but unbridled passion, distinguished in such cases, could here differentiate and real expert knowledge of character was not so advanced as now nor will be when psychology and psychiatry and the whole field of normal and morbid alienation of mind shall be taught in medical schools and degrees in alienism shall be conferred as Gowers advises and the colleges there are doing and as the writer advised a generation past in a public paper before the Missouri State Medical Association.

BRAIN AND MIND INVOLVING DISEASE THE BASIS OF ALL INSANITY OF MIND.

The expert should compare the patient with his former normal self and find out if there is brain disorder involving disease. He must find disease to account for the suspected or asserted insanity, really demonstrable or fairly presumptive disease, with no other cause not abnormal before he can correctly decide this question for brain involving and mind disordering disease is the true basis of all insanity. If it be not brain and mind perverting disease it is no proper subject for the physician, as such, on the witness stand as an expert.

A grave mistake the pseudo-medical expert makes as to the existence or non-existence of insanity is that of comparing the person under consideration as to insanity or sanity of mind, is to compare the mind of the assumed insane patient with the medical expert's own mental characteristics and decide by that comparison as to sanity or insanity. He estimates the mental display of the person in question as compared with himself and reasons thus: If I should do so and so I would be insane whereas what is natural in thought and action or speech, constituting the normal character of the expert might not be the natural character of the person considered as insane, whereas it is each person's own natural character which is to be considered and compared. It is the comparison with the natural self and the consideration of normal impressions of disease, circumstances or the abnormal or normal mentally changing circumstances, that change the character and justify the conclusion of insanity or sanity. The natural character may be impressed or changed and by rational causes and the

individual still be sane as in the conversion of the scoffer from a place in the seat of the scornful, under religious conviction or the immoral under other influences to a life of morality and abhorrence of formerly indulged evil.

Natural eccentricity of character, too, being normal to the individual is no evidence of insanity. It may be really evidence of a sane mind following the natural rhythmic and automatic movement of the mind when in abstract thought, like Ben Johnson's habit of touching each paling of a picket fence as he passes or like people who hum or sing or talk to themselves unconsciously or even like the purring of a cat when in a state of tranquility and self-satisfaction. Bizarre attitude or actions or speech natural to the person should only be regarded, as suggestive or confirmatory of insanity when newly developed as preceding from perversely impelling disease.

We should regard any case under consideration as insanity when it presents a departure from the habits of speech or action natural to the individual as the result of disease involving the brain and causing aberration in the associated mind's display not in harmony with the ordinary display of one's mind as compared with his normal self and we may decide this question whether we may correctly define the different stages and forms of the disease or not. We may not precisely know paranoia from paresis, folie du doute from folie a double forme, mania sans delire or primaire Verrucktheit from other varieties but if we know the person is not his or her natural self, but deranged in mind and unnatural from disease implicating the brain and disordering the mental action and causing departure from the natural display of the mind without the influence of external circumstances.

Yet a clinical knowledge of the varying phases of mental disease offers a criterion, *prima facie*, of extensive knowledge of the subject and consequent expertness thereon and therein. And those who would the most thoroughly comprehend the subject should seek to comprehend it in the same way that they understand and master any other question of disease.

If an extreme grief or over-mastering sorrow may so affect the brain through vaso-motor and cerebro-cardiac impress as to cause paresis or paralysis of brain and heart, either or

both, through the vagus and neuro-muscular relations as to cause vertigo, illusion, hallucination or delusion, we disturb this area of the neuraxis, even, and also inducing disorder of the stomach, liver, kidneys, etc., and in addition involving the genesic areas and even the psycho-erotic centers to the extent of psycho-erotic prostration or tragedy, we must conclude the possibility and probability of morbid and irresponsible brain circulatory and neuropathic change in certain of these cases of violent sudden tragedies.

Those erotonotics, (if I may for brevity be permitted to so designate those victims of erotogenital brain derangement from unrequited, repulsed or betrayed affection, or because of delusion in this regard, who suicide or kill or wound others, male or female, under eroto sexual excitement,) require careful study from the psychological expert, for they are often wronged to brain disease engendering degrees or have rational, revengeful, murderous, violent, uncharitable natural dispositions and impulses. The function of the medical expert here is to differentiate brain disease impulsion and vicious, violent, inconsiderate, selfish, ungoverned passions, sometimes cultivated and fostered by self purposely acquired alcoholic disturbance of brain. Just here also a chronic undesigned, alcoholic perversion, not designedly induced, must be considered in some instances of brain degeneracy thus caused.

In fact the entire field of the functional psychoses in male and female, a phase of this subject having been ably presented to this society at its last annual meeting by Dr. Chas. F. Reed, physician in the State Psychopathic Hospital at Hospital, Illinois. Likewise the study of the Etiology of the Psychoses, by Drs. Elenora F. Everhard and Gertrude Felker, read before this society last year, may be profitably considered in connection with this paper.

Cases like these, the McFarland-Richardson case, the case of General Sickles who shot Key, that of Ed Stokes who murdered Jim Fiske, all in New York, the deed in each case having been impelled by a grievance and great emotional disturbance, extreme desperation and other like outbursts of murderous passions, puzzle the expert to decide between disease impelled crime and normal but extremely overwrought

passion, for where great vaso-motor defect and associate circulatory brain disease exists a differential diagnostic conclusion is often difficult to reach.

Here is where, in the interest of science and humanity, the nicest and most expert power of psychologically discriminating knowledge and discernment in psychopathy is requisite, although it is here, in cases of this kind, that the inexpert in psychology and psychiatry are prone to most ready and confident conviction and utterance on the witness stand.

A shallow draught of psychopathic knowledge without adequate clinical experience intoxicating the brain of the non-expert while "drinking deeper sobers us again."

NOTE.

The substance of this paper has been imparted to the author's senior and junior student classes in psychiatry for the past several decades. He had intended to continue the subject with a description of the various forms of mental aberration described in the expansive records of Mental Alienation but time for this is not now at the author's command.

The foregoing definition and differentiation between sanity and insanity embraces all insane who have before been sane—*i. e.*, born so. Idiocy, imbecility, some forms of early appearing paranoia or *primaire Verrucktheit*, *dementia praecox* etc., may by some be offered in objection but the exceptions are more apparent than real. Even they, if closely and expertly scanned on the basis of clinical experience, only prove the rule. Early developed paranoia appears to be the nearest approach to a natural character form of insanity and therefore an exception, but even here, as the old disputing philosophers would say—"exceptio probat regulam." The departure from the family type of sanity as we often see in imbecility with its vagaries is not manifest before early manhood. It is much on a par in this regard with hebephrenia.

IS GENIUS A SPORT, A NEUROSIS OR A CHILD POTENTIALITY DEVELOPED?*

BY JAMES G. KIERNAN,

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Fellow Chicago Academy of Medicine, Foreign Associate Member French Medico-Psychological Association; Honorary Member Chicago Neurologic Society, Honorary President Section of Nervous and Mental Disease Pan-American Congress 1893, Chairman Section on Nervous and Mental Diseases American Medical Association 1894; Professor Neurology Chicago Post-Graduate School 1903; Professor of Nervous and Mental Diseases Milwaukee Medical College 1894-5; Professor of Nervous and Mental Diseases Illinois Medical College 1905; Professor of Forensic Psychiatry Kent-Chicago College of Law.

THE influence of the sheltered life upon a child over-trained in a rut is not taken into account by sociologists, just now advocating like Boris Sidis, spurring child potentialities. The law that mental and physical normality is a balance, whereby the greatest possible results are obtained from least possible expenditure of force, is ignored.

The struggle for existence between the organs resultant on the physiologic law shown by Virchow that any new function is a pathologic (albeit not a nosologic) event since it disturbs the physiologic balance previously existing. This, as already shown, creates what are called periods of stress when certain organs are arrested in development, either for the benefit of others (which is pathologic) or for the body as a whole, which is normal. This stress depends on two factors; the amount of assimilable nutriment and the power to turn it to the best advantage. The sheltered influence in Ruskin produced a very similar mentality to that of Carlyle.† In 1836 Mr. Donecq

*Continued from the *Alienist and Neurologist*, Nov., 1911.

†*Alienist and Neurologist*, 1895.

brought his four younger daughters to England. Ruskin, then 17, fell in love with the eldest, then 15; an elegant, gay, beautiful girl; Clotilde her family called her but she became Adele to him for the rhyming dictionary reason that Adele rhymed to shell, spell and knell. He was a shy, awkward boy of the fanatic Anglican type, evidently full of the adolescent mixture of self-conceit and doubt. He endeavored to entertain this Spanish-born, Paris-bred, Catholic-hearted girl with the subjects of the Spanish Armada, Battle of Waterloo and doctrine of transubstantiation. At this very time he was writing essays in the London "Architectural Magazine" on "The Poetry of Architecture or the Architecture of the Nations of Europe Considered in its Association with Natural Scenery and National Character."

The influence of Anglican "propriety," not Calvinism as Frederic Harrison continually puts it, appears not only in the topics chosen but in the fact that while the fathers contemplated marriage Mrs. Ruskin looked upon it as horribly impossible. Ruskin wrote in calfflove stress in consequence "Leoni, a Romance of Italy." In this is the chivalrous bandit whom Schiller had made fashionable and upon whom Byron set an enticing shade. It is Byron and water and was printed in that refuge of poetic platitudes "Friendship's Offering." Miss Donecq seems to have risen above the literary taste of the time for she not only smiled but "laughed over it in rippling notes of derision." Even in a girl of fifteen French esprit must have made a wooing by the Spanish Armada, Battle of Waterloo, doctrine of transubstantiation and a chivalrous, poetically melancholic bandit seem ludicrously absurd. Here as elsewhere even in Art, bourgeois limitations, born partly of congenital defect and partly of sheltered environment, dominate. Harrison finds Ruskin a "near-poet"* and there was a good "near" element in the results of Ruskin's genius from this same bourgeois element. When "Adele" married Baron Duquesne Ruskin, about to take his degree at Oxford, alarmed every one with an attack of hemoptysis. There was a slight cough precedent. He was ordered abroad. The Dean postponed his degree;

*Life of Ruskin, p. 32.

the wine merchant left his business. The whole family went with the invalid for two years to the continent. These hemorrhages, while like Scott's in certain particulars, displayed more of the neurotic element, suggesting hysteric instability. His father, desirous of having him a bishop (a desire showing us theologic surroundings were not, as Harrison calls them, Calvinistic, but Anglican) made him a gentleman commoner at Christ Church to secure his entrance into the best society. Here certain ingrained snobbishness in the elder Ruskins set the youth on the worst possible kind of a pedestal, fostering, through absence of scholastic responsibility, that primary egotism which spoiled so much of Ruskin's work and results. There is a suspicion of feminism in the descriptions given of Ruskin.

The "gentlemen commoners" regarded the young poet as a butt. He "was one of the gentlest creatures ever seen in Oxford, more like a girl than a man, who was looked on as a joke."* How much of this was the result of the sexual defect which led to the annulment of the marriage with Euphemia Gray, afterward Lady Millais, cannot be determined from the various lives of Ruskin, but the Oxford picture is significant. He made some good friends at Oxford but these influenced his bourgeois Anglican occultism very little. He met Dr. Acland, the clinician, Dean Liddle, Charles Newton and Dr. Buckland, with whom he studied geology. At Bucklands he met Dr. Daubeny and Charles Darwin. Of course the philistinism of the last was not then as apparent as it became later, but his evolution tendencies were present, albeit this is long before the "Origin of Species." Ruskin won a Newdigate prize for poetry; that colony of the Oxonian literary poseur. At Oxford he was still attached to his mother's apron string. That dour Anglican came to Oxford during term and had time to tea every evening. After his return from the journey for his health he took an honorary double fourth class; specially granted in recognition of mathematic and classic abilities. While in Italy for his health he took very little interest in the first sight of the country; neither the history, art nor romance of Florence, Siena or Rome impressed him.

*Harrison's Life, p. 34.

This shows that his later enthusiasm was not a spontaneous growth but a result of subsequent environment. According to Ruskin's mixed botanic metaphor his mind when at Oxford was "simply in the state of a squash ere it becomes a peascod." He speaks of "likings indulged rather against conscience, a dim sense of duty to myself, my parents and a daily more vague shadow of Eternal law." Whether this was the doubt of adolescence or an expression of vague sexuality, his tendency to cant gives no idea. He gave up the bishopric idea and declined, to use Harrison's bathos, to enter the sherry trade. Like the youth

Foredoomed his father's soul to cross,
Who pens a stanza when he should engross,

he decided to become "a prose poet" of Nature and Art. He had been enthusiastic about the Alps ever since he saw Turner's illustrations of Rogers' "Italy."

(TO BE CONTINUED.)

STATISTICS OF PHYSICAL MEASUREMENTS AND ANOMALIES OF CRIMINALS. ¹

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Honorary President of the Third International Congress of
Criminal Anthropology.

The purpose of this study is to give the results of physical measurements and anomalies of criminals, from the earliest investigations down to the present time. Since the most of these measurements were made and anomalies pointed out by Lombroso and his followers, it will be instructive to present briefly their general plan and interpretation of measurements and anomalies. But in doing this, there is no intention of advocating their theories, or any theories, but simply to present the facts.

Lombroso was led to his theories through his investigations. Thus in his autopsies on criminals he noted the "median occipital fossa," which had not been previously observed. This fossa is found in most of the lower mammals, as well as in monkeys. Such anomalies in man, which are common in lower animals, are called "atavisms" or "theromorphs;" that is, they are vestiges inherited from the lower animal kingdom. When the Italian school of criminology found any of these anomalies, its method was to inquire whether they had been noted, and how often, in prehistoric man, the lower races and in animals. They also sought for their presence in epileptics and idiots. The results of such investigations, which we shall give, indicate that in the bodies of criminals there are certain anomalies or peculiarities, especially in the skull, which resemble characters

1. Further measurements may be found in "Man and Abnormal Man" and "Juvenile Crime and Reformation," Senate Documents (by writer). These might be obtained through any United States Senator or Representative.

in animals, prehistoric man and lower races. From these facts Lombroso came to the conclusion, that there are born criminals, representing a type of mankind, called "Criminal Type," which existed before the origin of law, family and property, and that such individuals, who represent long-past conditions, when thrust into the present time, are not able to respect the security of life, property and other rights. This was regarded as an extreme conclusion on the part of Lombroso, and was the cause of vigorous attacks from scientists in all parts of the world.² But the Italian school does not at all mean by this, that every criminal in prison or court belongs to this type. But their theory is that there are born criminals with both physical and mental characteristics, inherited from lower or prehistoric races, which may be called an atavistic reversion.

One of these criminal peculiarities or characteristics is prognathism, where the upper jaw protrudes, making the incisor teeth very prominent. The skulls of the lower races and of the anthropoid apes are prognathous. Another characteristic of the so called criminal type is a receding forehead, associated with which is a marked projection of the superciliary arches. The two earliest known human skulls show a high degree of these two anomalies.

A remarkable peculiarity, already mentioned, is the median occipital fossa, which is common to higher primates, with the exception of the gorilla, chimpanzee and the orangoutang. It was present in prehistoric skulls (14.3 per cent)³, in ancient Peruvian skulls (15 per cent), in Australian blacks (28 per cent) and in all skulls of criminals about 20 per cent.

An abnormal widening of the face, due to a great distance between the zygomatic arches and an abnormal divergence of the two halves of the inferior maxillary bone are characteristic of the so-called criminal type.

There are two peculiar kinds of ear, (1) the handle-shaped or projecting ear and (2) the Darwinian ear, with a nodule called the tubercle of Darwin, a small prominence on the edge of the helix, an atavistic vestige of a former point of the ear. It is sometimes called Woolner's tip, because Woolner, the sculptor, first called Darwin's attention to it.

2. Cesare Lombroso, a modern man of science, by Hans Kurella, London, 1911.

3. Hans Kurella, already referred to.

It is well known that many peculiarities in the shape of the skull may be due to premature ossification, where certain sutures are forced to yield to the growth of the brain. One of the forms of skull thus produced, has the shape of a boat, called scaphocephaly, which is frequent among Eskimos. As will be seen in studies of criminals' skulls, this peculiarity has been found in about 40 per cent and in a higher per cent among living criminals.

Another sutural peculiarity are the Wormian bones, by which deficiencies of bone along the principal sutures are filled in. One of the Wormian bones was first discovered in mummies of an ancient Peruvian race and called the "Inca bone," and was found to exist in 15 to 20 per cent of cases. It has been found in some investigations to be present in 25 per cent of the skulls of murderers and in 8 per cent of the skulls of other criminals.⁴

CRANIAL CAPACITY.

Measurements of the cranial or cubical capacity of skulls and approximate estimates of this capacity in living criminals show a range from 2,050 c. c. to 1,050 c. c. The largest recorded cranial capacity in anthropoid apes is 621 c. c. That is, the difference in cubical capacity of skull in man is greater than the difference between the cubical capacity of the smallest human skull and that of the largest Simian skull.

According to Kurella, collections of criminals' skulls frequently have crania with a cubical capacity less than 1,100 c. c. but this is very infrequent in collections of normal skulls. Those ranging from 1,100 c. c. to 1300 c. c. are found in 6 to 10 per cent of normal skulls, but from 17 to 18, 65 and as high as 72 per cent in collection of criminals' skulls.

WEIGHT OF BRAIN.

The average weight of the European brain is 1360 grammes for men and 1220 grammes for women. In general, very few normal brains weigh as little as 1150 grammes, and many weigh more than 1500 grammes. But in criminals,⁵ the brain weight of the majority is less than 1300 grammes, whereas in normals about one-quarter weigh less than 1300 grammes.

4. Hans Kurella, already referred to.

5. Hans Kurella, already referred to.

PHYSICAL SIDE FIRST.

The preference in criminal anthropology for the study of the physical side of the criminal is mainly chronological. For in any new line of work, one must begin some place, and since already anthropology has produced a large number of physical data, and since such data are usually more definite in nature, they were naturally first considered. It is therefore more a matter of convenience than importance of investigations, that the physical side receives more attention. Another reason for this preference is that psychology has not as yet, like anthropology, established a sufficient number of facts to be called a science in the rigid sense.

ABNORMALITIES.

As far as investigations have proceeded, it may be said in general that physical abnormalities are more frequent in criminals than the general population. This is especially true of rudimentary organs.

Whatever theories one may hold in criminal anthropology, he is inclined to feel after examining the physical data thus far obtained, that there are a certain class of delinquents who are destined to a criminal career.

SKULL.

The cranium on account of its intimate relations to the brain, the organ of thought, is of first importance in anthropology.

TABLE 1.

Skulls of 66 Criminals (Debierre) ¹	Criminals	Non- Criminals
	Averages	Averages
Cranial capacity.....	1540 c. c.	1560 c. c.
Weight of skull.....	700 gr.	650 gr.
Cephalic index.....	80.7	80
Head Circumference.....	527 m. m.	525 m. m.
Half anterior circumference.....	246 m. m.	258 m. m.
Half posterior circumference.....	280 m. m.	265 m. m.
Bi-zygomatic diameter of face.....	132 m. m.	128 m. m.

There seems to be no great difference in Table 1 between the criminals and non-criminals, except it might be noted,

that the half-posterior circumference is larger in the criminal (280) than in the non-criminal (265), and that the half anterior circumference in the criminal is smaller (246) than in the non-criminal (258). This is interesting in connection with a theory that the anterior or frontal lobes of the brain are the seat of the intelligence, and that the posterior part of the brain is the seat of the emotions and passions. This predominance of the posterior part of the brain is common to the lower races. The weight of skull is greater in the criminal than in the non-criminal.⁶

But to illustrate the difficulty of making any conclusions, the writer had the privilege of examining a monkey in Munk's laboratory at Berlin, whose frontal lobes had been removed. Yet the monkey was just as intelligent as he was before the operation.

CIRCUMFERENCE OF HEAD.

In order to indicate the difference between 893 measurements of criminals and those of 14,000 soldiers, the figures in table 2 are given.

TABLE 2.

Circumference of head. (Lombroso)	14,000 Soldiers	Criminals (893)	Insane (262)
	Per Cent	Per Cent	Per Cent
590 m. m.....	60	3	—
580 m. m.....	6	2	—
570 m. m.....	13	5	3
560 m. m.....	22	9	11

It will be seen that normal individuals have much larger circumference of head than criminals.

CEPHALIC INDEX.

In a study of 100 normal persons and 600 criminals, table 3, Marro (Italy) found 73 per cent of normals and 81 per cent of criminals brachycephalic.

6. Archives de l'anthropologie criminelle, Tome 8, page 117, 1893.

TABLE 3. (Marro)7.

Cephalic Index	100	600	968
	Normals	Criminals	Criminals (Baer)
	Per Cent	Per Cent	Per Cent
Dolichocephalic.....	12	9	1.1
Brachycephalic.....	73	81	86
Trochocephalic.....	15	10	
Mesocephalic.....			12

Out of 968 criminals in Germany, Baer found 1 per cent dolichocephalic and 86 per cent brachycephalic. It would seem that cephalic index is rather a matter of race and region and not connected with criminality.

CRANIAL CAPACITY.⁸

Table 4 gives the average cranial capacity of 45 men of genius, 180 non-criminal Parisians and 61 assassins who had been executed. It will be seen that the cranial capacity of the assassins is slightly larger than that of the non-criminals, and that the men of genius exceed all in this respect.

TABLE 4.

	No. of Skulls	Cranial Capacity (Average)
Men of Genius (Gall).....	45	1665
Parisians (Broca).....	70	1560
Parisians (Manouvrier).....	110	1560
Assassins (Manouvrier).....	61	1571

JAW.

TABLE 5. MACEDO OF LISBON 9.

AVERAGES IN MILLIMETERS OF 962 LOWER JAWS OF DIFFERENT EPOCHS AND RACES.

Epochs, Races, etc.	Countries	No. of lower jaws	PROGNATHISM			Ce- phalic index	Index of jaw
			Sub- Nasal	Nasal	Super- Nasal		
MILLIMETERS							
Contemporaries	Portugal.....	820	11.1	16.8	26.6	75	53.1
Contemporaries	Galatia.....	10	10.4	15	27.7	77	
Bogotians	America.....	20	11.8	24.8	24.3	74	58.4
Patagonians	America.....	3				85	52.9
Arabs	Portugal.....	4				71	48.9
Romans	Portugal.....	5	9	11	19	77	53.5
Iron Age	Switzerland.....	3	10.5	14	22.5	79	52.5
Sambaquis	America.....	8	11.3	17.2	32.7		
Caves	America.....	12	12.5	17.3	27.9		
Neolithic Age	Portugal.....	15	13	15	23	76	
Pre- " "	Portugal.....	12	11	14	21	77	50.1
Assassins	Italy.....	12	9.3	13.2	24.7	79	49.6
Thebes	Italy.....	25				84	51.8
Swindlers	Italy.....	9				81	52.3

7. *L'homme criminel*, page 212, vol. 1.8. *Congres International d'Anthropologie Criminelle*, Tome I, page 147.9. *Congres International d'Anthropologie Criminelle*, Paris, 188.

In Table 5 are given the average in millimeters of prognathism of 962 lower jaws in persons of different epochs and races. From the table it will be seen that, allowing for ethnical variations, prognathism, index of jaw and cephalic index are somewhat similar in all epochs and social agglomerations, be it in geologic times, in savage races, civilized peoples or criminals. Macedo considers this table as unfavorable to the hypothesis, that the criminal is the result of ancestral transmission.

PALATAL TRANSVERSE SUTURE.

Table 6 gives the results of studies of the palatal transverse suture in 130 skulls of normal persons and 148 of criminal adults in the laboratory of legal medicine at the University of Turin, Italy.¹⁰

TABLE 6.

Palatal Transverse Suture (3000 Camillo) Turin, Italy.	1st Type Bending forward	2d Type Recti- linear	3d Type Bending backward	No. Ex- amined
	per cent	per cent	per cent	
Normal women	49	28	23	98
Normal men	58	17	25	130
Criminal women	62	25	15	311
Criminal men	71	17	12	148

The palatal transverse suture has only in recent times been studied in detail. The prevalent type of this suture in Europe is the first one bending forward. The criminals exceed the non-criminals, or normal, by 9 per cent in frequency of this type. This difference is too marked, according to specialists, to be attributed to individual variations.

It may be of interest to know, that in all mammals, with the exception of the gorilla and the phocidae species, the first type of suture is almost the only one found.

10. *Congres International d'Anthropologie Criminelle*, Turin, 1906.

BRAIN.

The average weight of brain in man in general is, according to many specialists, 1350 grammes.

TABLE 7.

Criminals (Parnisetti). 11.

22 brains weigh from 1150 to 1250 grammes.
 42 brains weigh from 1251 to 1350 grammes.
 18 brains weigh from 1351 to 1450 grammes.
 3 brains weigh from 1451 to 1550 grammes.
 2 brains weigh from 1551 to 1650 grammes.

Table 7 shows that 64 brains of criminals out of 87 in all, weigh less than 1350 grammes, that is 74 per cent, and that 23 only exceed the average, that is 26 per cent. Parnisetti found anomalies of the arterial polygon of Willis in 66 per cent of those brains, and 34 per cent without them.

It is well known that the action of the brain is very much influenced by the circulation of the blood. The anomalies in the arterial network, which distributes the blood to the brain, can diminish the nutritive energy of the brain and may in consequence produce an inferior degree of organization in the higher nervous centers, causing arrested development.

ARTERIES.**TABLE 8. (Parnisetti) Arteries.**

Name of Arteries. 13.	No.	Per Cent
VERTEBRAL		
Symmetrical.....	45	52
More developed on right.....	20	23
More developed on left.....	22	25
POSTERIOR CEREBRAL.....		
Symmetrical.....	42	48
More developed on right.....	19	22
More developed on left.....	26	30

In Table 8 are given data for the vertebral and posterior cerebral arteries. The vertebral arteries enter the cranium by the foramen magnum, and extend up, down in front and

11. *Le Portrait parlé et son application*, etc. R. A. Reiss, *Congres International de l' Anthropologie Criminelle*, Turin, 1906.

12. *Congres International* (already referred to), Amsterdam, 1901.

13. *Congress International* (already referred to), Amsterdam, 1901.

within on the side of the medulla oblongata, and on the plane of the posterior border of the protuberance. The vertebral arteries are symmetrical in 52 per cent of the cases, and slightly more developed in the left than right. According to Parnisetti, prison physician in Alexandria, Italy, there exists a relation between the vertebral and the posterior cerebral arteries on the same side; if, for instance, the vertebral is more developed on the left, the cerebral posterior also will be more developed on the left.

Parnisetti gives in Table 9 the results of his investigation of the circle of Willis in 87 criminals. Among the signs of degeneracy are some frequent anomalies in the network of arteries at the base of the brain.

TABLE 9. (Parnisetti)

Name of Arteries..... (87 Criminals).....	No.	Per Cent
INTERNAL CAROTIDS:		
Symmetrical.....	39	45
More developed on right.....	31	36
More developed on left.....	17	19
ANTERIOR CEREBRAL:		
Symmetrical.....	51	59
Atrophic.....	1	1
More developed on right.....	16	18
More developed on left.....	14	16
Two united into one.....	5	6
ANTERIOR COMMUNICATING:		
Slender.....	10	12
Developed.....	35	41
Double.....	12	14
Triple.....	1	1
Absent.....	28	32
POSTERIOR COMMUNICATING:		
Symmetrical Very Slender.....	10	11
Slender.....	20	23
Developed.....	12	14
Right more developed.....	19	22
Left more developed.....	26	30
SYLVIAN ARTERIES:		
Symmetrical.....	45	52
More developed on right.....	24	27
More developed on left.....	18	21

Examining the table the internal carotid arteries which nourish the anterior and lower part of the brain, are symmetrical in 45 per cent of cases, more developed on the right in 36 per cent and on the left in 19 per cent of the cases.

The anterior cerebral arteries extend in front and within and pass under the chiasma of the optic nerves, reunite and penetrate into the anterior fissure of the two cerebral hemispheres to be distributed into the corpus collosum.

These cerebral anterior arteries are symmetrically developed in 51 out of 87 cases, that is 59 per cent.

The anterior communicating arteries are much developed in 41 per cent of the cases and absent in 32 per cent. Their absence is common in certain animals, as the dog and horse. The posterior communicating are rather slender than developed, and more developed on the left than on the right. The Sylvian arteries are symmetrical in 52 per cent of cases, and more developed on the right than left.

TABLE 9-1/2. (Parnisetti).

CIRCLE OF WILLIS.	No.	Per Cent
Symmetrical arteries.....	30	34
Asymmetroid arteries.....	57	66
1. Anomalies of development and direction.....	29	33
2. Anomalies of origin and development.....	11	13
3. Anomalies of substitution, origin and direction.....	12	14
4. Anomalies of origin, direction and development.....	5	6
Total	57	66

Considering the Circle of Willis as a whole, Table 9½ shows two general classes of arteries: (1) Symmetrical where there are no anomalies, or so few as to be negligible and (2) Asymmetrical or abnormal, where in addition to anomalies of development, there are anomalies of origin, direction, etc. Thirty or 34 per cent are symmetrical, and 57 or 66 per cent are asymmetrical. Under the head of anomalies of development and direction, are included those polygons, where no part is more developed than its "homonyme opposé," in calibre volume, ramification, etc. This is the case in 29 out of 87 subjects, that is 33 per cent.

Under the second group are anomalies of origin in addition to those of development, where the per cent is 13. The third group, including substitution, origin and direction, shows 14 per cent. The fourth and last group includes the anomalies of origin, direction and development giving 6 per cent.

HEIGHT.

Table 10 gives for purposes of comparison the heights of 10,651 soldiers of the French corps.

TABLE 10. (Marty) 10,651 French Corps.

Height of Soldiers	No. of Soldiers	Per Cent	Height	No. of Soldiers	Per Cent	Height	No. of Soldiers	Per Cent
m.			m.			m.		
1.54	141	1.3	1.66	814	7.6	1.78	49	0.4
1.55	194	1.8	1.67	712	6.6	1.79	45	0.4
1.56	231	2.1	1.68	709	6.6	1.80	28	0.2
1.57	314	2.9	1.69	565	5.3	1.81	10	0.09
1.58	411	3.8	1.70	533	5.0	1.82	10	0.09
1.59	450	4.2	1.71	394	3.6	1.83	8	0.07
1.60	507	4.7	1.72	329	3.0	1.84	7	0.06
1.61	567	5.3	1.73	222	2.0	1.85	1	0.009
1.62	579	5.4	1.74	313	1.9	1.86	2	0.01
1.63	681	6.3	1.75	142	1.3	1.87	3	0.02
1.64	762	7.15	1.76	107	1.0	1.88	2	0.01
1.65	827	7.7	1.77	74	0.6	1.89	1	0.009

Table 11 gives in meters and centimeters the heights of 4,704 Frenchmen of the Battallions in Africa. These men were sent to Africa on account of some offense, and are classed as criminals, but in a light degree.

TABLE 11. 4,704 of the Battallion in Africa. Marty.

m.			m.			m.		
1.54	94	1.9	1.66	312	6.6	1.78	27	0.5
1.55	97	2.0	1.67	237	5.1	1.79	24	0.5
1.56	105	2.2	1.68	308	6.5	1.80	14	0.2
1.57	166	3.5	1.69	213	4.5	1.81	8	0.1
1.58	184	3.9	1.70	235	4.9	1.82	5	0.1
1.59	205	4.3	1.71	150	3.1	1.83	4	0.08
1.60	271	5.7	1.72	138	2.9	1.84	1	0.02
1.61	244	5.1	1.73	98	2.0	1.85	1	0.02
1.62	302	6.4	1.74	90	1.9	1.86	1	0.02
1.63	273	5.8	1.75	82	1.7	1.87	1	0.02
1.64	307	6.5	1.76	51	1.0	1.88	1	0.02
1.65	344	7.3	1.77	22	0.4	1.89	1	0.02

Comparing the two tables, certain differences will be observed. There is a little irregularity in the figures for the Battallions (Table 11) which is probably due to their smaller number. The number, however, is sufficiently large to have some significance.

In the table 11 for the Battallions there are higher per cents of small heights and lower of average heights than in the corps.

As the average height of French soldiers is 1.65 m., it is an important one for the comparison. The per cent for the Battallions (7.3) is less than that for the Corps (7.7) for this

height, and the per cent for the height in Battallions lessens more quickly than in the Corps. After 1.78m., the per cents are greater in the Battallions. In general the Battallions, or those with criminal tendency, have less height than the Corps.

In Table 12, the criminals are classified according to height. The first class consists of those less than 1 meter and 54 centimeters and 1 meter and 55 centimeters to 1 meter and 56 centimeters in height.

TABLE 12. (Marty).

Divisions according to Height	No. of Criminals	Average Age after first conviction		Total No. of Convictions	Average for each person
		years	months		
Less than 1m54, 1m55, and 1m56.....	200	18	3	613	3.06
Height 1m65.....	200	18	5	652	3.26
Height 1m73 to 1m80 and more.....	200	17	7	596	2.98

The second class are those 1 meter and 65 centimeters in height, which is the average height in France. The third class are those from 1 m. 73 cm. to 1 m. 80 cm and above. This classification gives the extremes and the mean, making distinct types. There are 200 criminals in each class. The table shows that the tallest began their criminal career at youngest age (17 years and 7 months) and those with average height (1m. 65)were oldest (18 years 5 months) when first convicted.

ARM REACH IN RELATION TO HEIGHT.

Table 13 shows that in criminals the arm-reach is, in a large majority of cases, greater than the height.

TABLE 13.

Criminals (Lombroso, Rosi, Marro).	Arm-Reach to Height		
	Less	Equal	More
800 Criminals.....	91	86	623
100 Criminals.....	11	1	88

Baer in 968 criminals found that 75 per cent of murderers had a larger arm reach than height, 18 per cent less and 7 per cent equal in arm reach to height. Those who believe that crime, however much environment modifies it, is fundamentally hereditary, note the fact, that in the animals just below man, the arm reach exceeds the height.

CIRCUMFERENCE OF CHEST.

Tables 14 and 15 give chest circumference (in centimeters), number of men and per cent having different circumferences among 10,689 in the Corps of France, and 4445 in the Battalions.

From an examination of the table, the Battalions show higher per cents for chest circumference, 77 cm., and lower than the Corps, which has a higher per cent of chest circumference from 78 to 86 centimeters. The circumference above the average, from 87 to 98 centimeters, are largest in the African Battalion except for the circumferences of 92 centimeters.

TABLE 14. 10,689 in Corps of France. Marty.

Chest Circumference	No. of men	Per cent	Chest Circumference	No. of men	Per cent
cm.			cm.		
75	25	0.23	87	737	6.8
76	86	0.8	88	681	6.3
77	120	1.1	89	547	5.1
78	322	3.0	90	387	3.6
79	466	4.3	91	250	2.3
80	706	6.6	92	205	1.9
81	760	7.1	93	97	0.9
82	927	8.6	94	65	0.6
83	997	9.3	95	52	0.4
84	1103	10.3	96	30	0.2
85	1121	10.4	97	17	0.1
86	950	8.8	98	8	0.07
			99	5	0.04

TABLE 15 4,445 in African Battalion. Marty.

75	11	0.24	87	392	8.8
76	45	1.0	88	315	7.0
77	61	1.3	89	270	6.0
78	101	2.2	90	165	3.7
79	160	3.5	91	116	2.6
80	258	5.8	92	70	1.5
81	306	6.8	93	60	1.3
82	362	8.1	94	37	0.8
83	388	8.7	95	36	0.8
84	433	9.7	96	24	0.5
85	405	9.1	97	10	0.2
86	392	8.8	98	8	0.1
			99	1	0.02

In general in the Battalions of Africa, there are relatively more very small and large circumferences of chest. In the Corps of France there are more average and exceptional circumferences. If we get the general average, the result will be as follows:

Corps of France, Average Circumference	0.844m.
Battalions of Africa	" " 0.846"

This difference in favor of the Battallions of Africa is so slight as to be a negligible quantity, so that we can regard the Battallion and the Corps as approximately equal as to circumference of chest.

WEIGHT.

In tables 16 and 17 are given the weights in kilograms of 10,071 men in the Corps of France, and 2,545 men in the Battallions in Africa.

TABLE 16. Corps of France 10,071 men Marty.

10,071 men Weight in kilos	No. of men	Per cent	Weight in kilos	No. of men	Per cent
46	20	0.1	71	89	0.8
47	28	0.3	72	88	0.8
48	74	0.7	73	53	0.5
49	101	1.0	74	39	0.3
50	230	2.2	75	68	0.6
51	234	2.3	76	21	0.2
52	402	3.9	77	21	0.2
53	388	3.8	78	18	0.1
54	430	4.2	79	7	0.06
55	699	6.9	80	18	0.17
56	586	5.8	81	6	0.05
57	699	6.9	82	7	0.06
58	658	6.5	83	3	0.02
59	517	5.1	84	3	0.02
60	898	8.9	85	5	0.04
61	502	4.9	86	3	0.02
62	638	6.3	87	1	0.009
63	436	4.3	88	2	0.01
64	373	3.7			
65	555	5.5	90	1	0.009
66	259	2.5	95	1	0.009
67	297	2.9			
68	231	2.2			
69	153	1.5			
70	186	1.8			

TABLE 17. Battallion of Africa (2,545 Men) Marty.

46	2	0.07	71	78	3.0
47	8	0.3	72	72	2.8
48	8	0.3	73	19	0.7
49	9	0.35	74	50	1.9
50	24	0.9	75	40	1.5
51	33	1.2	76	28	1.1
52	36	1.4	77	7	0.2
53	66	2.5	78	17	0.6
54	62	2.4	79	6	0.2
55	83	3.2	80	6	0.2
56	72	2.8	81	0	6.00
57	76	2.9	82	1	0.03
58	123	4.8	81	0	
59	105	4.1			
60	165	6.4			
61	129	5.0			
62	159	6.2			
63	120	4.7			
64	159	6.2			
65	181	7.1			
66	139	5.4			
67	120	4.7			
68	145	5.6			
69	98	3.8			
70	99	3.8			

From weights 46 to 60 kilograms, the Corps shows the largest per cents. From 61 kilograms the Battallions take the lead until 80 kilograms weight. If the general average for both are sought, the result is as follows:

Corps, Average Weight 59.74, Battallion Weight 63.45.

The men in the Battallions are therefore heavier than in the Corps.

As has been stated, no conclusions can be drawn as to any necessary relation between weight and crime. Our only purpose is to give the facts as far as they have been obtained.

SPECIFIC GRAVITY.

In table 18 are given the figures for the specific gravity

TABLE 18 (Mies) 14.

Specific gravity of 28 Criminals.....	1040	1048
Specific gravity of 31 Normals.....	1032	1039
Specific gravity of Young Persons.....	1024	1029

of criminals, normals and youth. The method was to put the body into a tank of water, allowing the subject to breathe through a tube. The amount of water displaced was measured. The criminals were superior to the non-criminals or normals.

ANOMALIES AND ECONOMIC POSITION.

From table 19 it will be seen that the most physical an-

TABLE 19. (Rossi) 15.

300 Adults	300 Children, 8 to 16					
	Laborers	Farmers	Rich	Laborers	Farmers	Rich
	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent
1 to 2 Anomalies.....	56	36	68	18	16	44
3 to 4 Anomalies.....	31	36	12	52	68	38
5 to 6 Anomalies.....	9	0	0	27	23	6

omalies are found among laborers and farmers, and the fewest among the rich.

PELVIS.

Tenchini studied the pelvis of 57 skeletons of criminals, and found the index in every case more than the average, which is 5.01.

14. Virchows Archive, 1900.

15. Archivio di Psichiatria, etc. 1899.

TABLE 20. Anomalies found in the Pelvis (Corcia and Barchetti)

	Per Cent
Thinness of pelvic bones (16 cases).....	50
Incomplete suture of sacral canal (16 cases).....	40
Diminution of height of pelvis (16 cases).....	36
"Fosse circulaire".....	16
"Fosse ovale" of the pelvis.....	8
Masculine characteristics in pelvis of 100 prostitutes.....	40

It is of historical interest to note that the Romans called those born with presentation of feet "Agrippa." Such were the cases of Agrippine, wife of Germaine and Agrippine, wife of Domitian. Caligula, Nero and the descendants of Mary of Medici all had an anomalous presentation.

JUVENILE CRIMINALS.

TABLE 19a. 188 Young Criminals
437 Young Men

Ages	Criminals			Normals		
	Circumference of head	Height	Weight	Circumference of head	Height	Weight
	m. m.	c.		m. m.		
10 to 13.....	514	1.31	27.3	529	1.30	26.4
13 to 16.....	528	1.41	34.7	545	1.41	34.7
16 to 18.....	533	1.52	49.6	554	1.51	43.1
19.....	549	1.63	54.9	555	1.56	46.7

In table 19a are given the circumference of head, height and weight of 188 young criminals and 437 young persons of similar age, in the same surroundings and similar kind of life. Comparing these figures for the two classes, the criminals are slightly superior in height and distinctly superior in weight to the normals. But in circumference of head the juvenile criminals are inferior at every age to the normal young persons.

THORAX.

Ribaudo¹⁶ found in 200 military criminals 43 per cent with asymmetries of thorax.

HAIR.

Battistelli¹⁷ found in 1000 persons, of whom 660 were criminals and 200 normal, the following results:

TABLE 21

Hair black, thick and glossy in criminals.....	35%
Hair black, thick and glossy in normals.....	29%
Hair glossy..... in criminals.....	51%
Hair glossy..... in normals.....	34%
Rarity of Beard..... in criminals.....	60%
Rarity of Beard..... in normals.....	33%

16. Archives, already referred to

17. Archives XXII already referred to.

In table 21 it will be seen that the hair is black, thick and glossy more frequently in criminals (35°) than in normals (29°); that the hair is glossy much oftener in criminals (51°) than in normals as also is rarity of beard (60°) in criminals and 33° in normals.

HAIR AND EYES.

In a study of 859 criminals, Perrier found, as indicated in table 22, that the great majority (90%) had chestnut colored hair. The iris was orange in 42 per cent, yellow in 23 and chestnut in 19 per cent.

TABLE 22. (Perrier)18.
(859)

Hair	No.	Per Cent
Black Hair.....	59	7
Chestnut.....	776	90
Blonde.....	19	2
White.....	5	1
Eyes Iris		
Unpigmented.....	78	9
Pigmented with		
Yellow.....	199	23
Orange.....	357	42
Chestnut.....	164	19
Maroon.....	60	7

Comparing (table 23) 500 normals with 500 criminals as to color of hair, the dark colors predominate in criminals.

The individuals compared are from the same region (Piedmont) in Italy.

TABLE 23. (Lombroso)19.

Hair	500 Normals Per Cent	500 Criminals Per Cent
Black.....	27	43
Chestnut.....	39	43
Blonde.....	30	13
Red.....	3	1

In table 24, Bertillon gives figures from examinations of 4000 criminals showing predominance of dark eyes; 32 per cent had a maroon iris, 22 per cent dark chestnut and 32 per cent a yellow or red iris, but unfortunately no normals were studied at that time for comparison.

18. *Arheives de l'Anthropologie Criminelle*, Tome 21, p. 388, 1907.

19. *L'homme Criminelle*.

TABLE 24. (Bertillon)20.

Eyes (Iris)	400 Criminals	1620 Criminals (Lombroso)	900 Normals (Lombroso)
	Per Cent	Per Cent	Per Cent
Maroon.....	32	60	64
Dark Chestnut.....	22		
Yellow or Red.....	32		
Greenish.....	12	4	7
Blue.....		36	29

In an investigation by Lombroso and Ottolenghi of 1620 criminals and 900 normals (table 24) in the same region of country (Piedmont, Italy), blue eyes predominate in criminals (36%) as compared with normals (29%).

In general, it would seem, as far as data have been obtained concerning hair and eyes of criminals, that dark shades predominate.

EARS.

At Turin, Italy, Gradenigo made a study of the ears of 15,000 men and 10,000 women and 304 male criminals, the results of which are given in table 25. The per cent of regular pavillons is much lower (29%) in criminals than in normals (50% men; 62% women). Projecting or outstanding ears are twice as frequent in criminal men as in normal men. Women have the fewest anomalies, as is usual. A striking exception is in the Wildermuth ear, an anomaly characterized by promi-

Ears (Gradenigo)	304 Criminal Men	15000 Normal Men	10000 Normal Women	150 Insane Women
Pavillon	Per Cent	Per Cent	Per Cent	Per Cent
Regular.....	29	50	62	46
Adherent lobes.....	25	26	13	39
Ears Outstanding	24	12	3	4
Wildermuth Ears..	18	6	9	6

nence of antehelix as contrasted with helix. One would naturally expect the criminals to have a distinctly higher per cent of adherent lobes, but they are even one per cent lower (25) than in normals (26%). But as has been suggested, contrary results in special investigations are to be expected in not only a new line of inquiry, but especially in its early stages.

ANOMALIES OF FEET.

In table 27 are given the per cent of anomalies in feet and hands of 500 criminals. In 100 criminals 58 per cent had the left foot longer than the right. The left arm also is longer than the right in 54 cases out of one hundred. This

TABLE 27. (Penta, Rossi, Lombroso)

400 Criminals	Per Cent
Anomalies of lower members.....	5
Anomalies of feet.....	7
Anomalies of hands.....	4
100 Criminals	Per Cent
The right foot longer than left.....	30
The left foot longer than right.....	58
The left equal to right foot.....	12
600 Criminals	Per Cent
The feet flat (common in negroes).....	17
Syndactyly.....	05
100 Criminals	Per Cent
Right arm longer.....	43
Left arm longer.....	54

tendency to greater development of left side of body may be regarded as atavistic, for in a study of 42 anthropoid apes, Rollet found the left humerus longer than the right in 60 per cent of the cases, and in man this was the case in only 7 per cent.

Table 28 gives the distance between the big toe and next toe (1) when foot is at rest and (2) when effort is made to increase the space between the toes. As indicated in table,

TABLE 28. Feet with effort.

Length of space between the big toe and next toe (Ottolenghi and Carrara)	Feet at rest	From	From
	8 to 11 mm.	11 to 18 mm.	21 to 30 mm.
	Per Cent	Per Cent	Per Cent
100 Non-Criminals.....	5	0	16
200 Criminals.....	27	7	25
31 Epileptics.....	25	5	27

the criminals and epileptics show much higher per cents of individuals with abnormal distance between big and second toe.

FOREHEADS.

In the study of one thousand photographs of criminals, an assistant of Bertillon at Paris found the following results:

High foreheads,..... 87 or 8.7%	Receding foreheads,..... 154 or 15.4%
Medium foreheads,..... 537 or 53.7%	Intermediate foreheads, ... 790 or 79.0%
Low foreheads, ... 376 or 37.6%	Vertical foreheads,..... 56 or 5.6%

All foreheads with an inclination of 63° or less are receding.
All foreheads with an inclination from 63.5° to 81° are intermediate.

All foreheads with an inclination of more than 81° are vertical.

In a study of 119 criminals Marro found (table 29) the criminals with a much higher per cent of narrow and low foreheads than the non-criminal, and the non-criminal with

TABLE 29. (Marro)

119 Criminals.	Criminals	Normals
	Per Cent	Per Cent
Narrow forehead.....	86	59
Low forehead.....	41	15
Large forehead.....	13	41
High forehead.....	58	84

a much higher per cent of large and high foreheads than the criminals.

BLOOD PRESSURE.

Table 30 gives the figures for an approximate estimation of blood pressure on 17 epileptics, 21 criminals, 30 prostitutes and 22 medical students, the last serving as normals for comparison. The greatest variations are with the abnormals.

The authors were unable to give the causes for the variations of pressure.

TABLE 30.

Blood Pressure (Lombroso, Audenino) 21 on both arms.	Epilep- tics (17)	Crim- inals (21)	Prosti- tutes (30)	Medical students (22)
Equal or with a difference less than 5 mill. gr.....	6	6	7	14
Difference from 5 to 10 mill. gr.....	3	5	6	5
More than 10 mill. Hg.....	8	10	17	3

SENSE OF SMELL.

Table 31 shows the results of experiments to test acuteness of smell on 80 criminals (50 men and 30 women) and 50 normal

TABLE 31. (Frigerio) 22

Acuteness of Smell	Individuals Examined	Number Examined	Errors
Average	Men	Normal 30	3
		Criminal 50	5
	Women	Normal 20	4
		Criminal 30	5
Minimum	Men	Normal 30	7
		Criminal 50	10
	Women	Normal 20	8
		Criminal 30	12
Maximum	Men	Normal 30	1
		Criminal 50	3
	Women	Normal 20	1
		Criminal 30	2

21. *Congres International d'Anthropologie Criminelle*, Amsterdam, 1901.22. *Congres International d'Anthropologie Criminelle*, Lyon, 1890.

people (30 men and 20 women); the men were mostly guards in the prison and the women were of average education.

SENSE OF TASTE.

Frigerio also classified and examined for sense of taste, 60 criminals "by nature," 20 criminals "by occasion,"

TABLE 32. (Frigerio) 23.

	Number of persons	Sour			Sweet			Salt		
		Groups of Solutions 1st 2d 3d			Groups of Solutions 1st 2d 3d (24)			Groups of Solutions 1st 2d 3d (25)		
		Per Cent			Per Cent			Per Cent		
Criminals by nature.....	20	15	47	38	11	53	35	16	47	36
Criminals by occasion.....	20	5	65	30	35	65	...	35	40	25
Individuals, lower class.....	20	25	50	25	25	60	15	40	55	5
Professors.....	50	54	32	14	70	25	5	80	20	...
Women criminals.....	20	15	65	20	30	55	15	60	25	15
Women, normal.....	20	50	40	10	80	20	...	90	10	...
								3		

20 men of the lower classes, 50 professors and students, 20 normal women of average education and 20 criminal women, all between 20 and 50 years of age.

The tests were made for sour, sweet and salty taste, with very weak solutions of strychnine (from 1—800,000), sugar (from 1—100,000), and salt (from 1—600).

As indicated in table, taste was less developed in criminals than normal persons; was less developed in criminals by nature than criminals by occasion, a little less in women than men, less in criminal than normal women, but more delicate than in criminal men.

CONSTITUTION.

Table 33 gives the figures for the constitution of 10,665 men in the Corps and 4529 men in the Battallions of France. Dr. Marty, in his examination of the men, classifies their constitutions as "Very good, good, sufficiently good, passable and mediocre." The figures in the table show that the criminals or men in the Battallions have better constitution, than the

23. Already referred to.

24. 53 criminals by nature.

25. 56 criminals by nature.

normals or men in the Corps. It is true that there is a slightly higher per cent of mediocre (2.5) constitutions in the Battallions but this is much more neutralized by much greater per cents for superior constitutions. That the criminals of Battallions should have better constitutions than the normals or non-

TABLE 33. Corps of France. 26—(10,665 men)

CONSTITUTION	No.	Per Cent
Very good.....	1161	10
Good.....	5224	49
Sufficiently good.....	3209	30
Passable.....	908	9
Mediocre.....	114	2
BATTALION (4529 men)	No.	Per Cent
CONSTITUTION		
Very good.....	848	18
Good.....	2810	52
Sufficiently good.....	3209	30
Passable.....	110	24
Mediocre.....	114	25

criminal is striking, and Dr. Marty explains the cause of this as due to family conditions which are more unfavorable for the criminals, so that the physically weak succumb to the early and detrimental conditions, and those children who survive are physically selected, and thus superior in constitution owing to their survival after the hardships encountered. The writer may state a somewhat similar result in an investigation he made of physical development in relation to disease, finding to his surprise, that those persons who had had the most diseases were superior in physique. This was probably due to their having survived the diseases, and were therefore constitutionally stronger.²⁷

PROPORTIONATE PHYSIQUE.

The relative proportions of height, weight and chest circumference are of importance in estimating the general physical condition of persons. A height disproportionate to weight and chest circumference is not a favorable sign. It has been shown that for the French soldiers the chest circumference should be equal to half the height plus one centimeter.

26. Archives de l'Anthropologie Criminelle, Tome 13, page 192, 1898.

27. For details, see "Man and Abnormal Man" (by writer) Senate document No. 187, 58th Congress, 3d. session.

TABLE 34. (Marty).

	Average height	Average Weight	Average Chest circum- ference
	m.	kg.	m.
Corps of France.....	1.65	59.74	0.844
Battallions of France.....	1.64	63.45	0.846

Applying this to the average height for French soldiers, 1 m.65, we obtain a chest circumference of 0m.835. Subtracting this from 0m844, the average chest circumference of the Corps of France, we obtain 0m.009 as an excedent over the required minimum (.0m835). Applying the same process to the figures for the Battallions of France we obtain an excedent 0m.023, which exceeds the figure for the corps of France (0m.009), enough to be of importance, and show that the Battallions excel in proportions of height to chest circumference.

For the French army, a height of 1m.65 (the average) requires a weight of 60 kilograms, 100. Subtracting from this the average weight of the Corps of France (59,740), we obtain a difference of 0 kg. .360. Carrying out a similar computation for the Battallions of France, we find an excedent or surplus of 3kg.856.

The men in the Battallions, therefore, excel the men in the Corps as to a symmetrical physical development. This harmonizes with the conclusion that the Battallions have better constitutions than the Corps. For in general organic superiority is closely related to symmetrical development.

PROPORTION OF ANOMALIES.

In table 35 is given the proportion of anomalies found by Penta in 400 of the most pronounced criminals.

TABLE 35. (Penta)28.

	Per Cent
Prognathism.....	45
Large projecting zygoma.....	37
"Mandibular glands".....	29
Large frontal sinuses.....	30
Projecting orbital arches.....	21
Large jaw.....	27
Low narrow forehead.....	19
Retreating forehead.....	22
Unequal ears.....	24
Projecting ears.....	35
Ears with Darwin's tubercle.....	45
Facial hemathophy.....	18
Facial asymmetry.....	15
Anomalies of teeth.....	22
Anomalies genital parts.....	15
Pallor of face.....	31

Some of the most frequent anomalies given in table are prognathism (45%), large projecting zygoma (37%), large frontal sinuses (30%), outstanding ears (35%) and tubercles of Darwin (45%). Inasmuch as these anomalies are found in savage races and in anthropoid apes, some regard them as signs of atavism.

Table 36 gives figures for cumulation of anomalies in 346 great criminals, 353 minor criminals, 711 soldiers and 200 normal or non-criminal men. It will be noted when the number of anomalies is small, as 1 to 2, the normals have nearly as many as criminals, but when the cumulation is larger, the figures for the normals are relatively very small. Certain anomalies are comparatively small in normals, as large jaws,

TABLE 36. (Ferri, Lombroso)29

Cumulation of Anomalies	346 great criminals	353 minor criminals	711 soldiers	200 normals
	Per Cent	Per Cent	Per Cent	Per Cent
1 to 2 anomalies...	47	56	51	53
3 to 4 anomalies..	33	52	11	16
5 to 6 anomalies..	6	2		
7 and more anomalies..	0.3	0.3		

outjutting ears and receding forehead. This is the case when the normals show as many general anomalies as the criminals according to table. It is doubtless true that many non-criminal, whom we call normal for convenience, may have latent criminal instinct, which fortunately has escaped the temptations or conditions which might have brought it to the surface.

It will be noted from table 37, that only 7 of the children in the house of correction were without physical anomalies,

TABLE 37. (Lombroso.)

79 Children in the House of Correction	No. having physical anomalies
Outstanding ears.....	30
Small and low forehead.....	21
Phagiocephalic.....	19
Prominent bosses.....	16
Sutures (releve).....	15
Prominent jaw.....	14
Facial asymmetries.....	14
Forehead (couvert).....	10
Cretein physiognomy.....	10
Without physical anomaly.....	7

or less than 9 per cent, and from table 38 that 84% of the children in the public schools were without physical anomalies, or more than 50 per cent. Table 38 shows those morally abnormal to have much higher number of physical anomalies than the morally normal.

TABLE 38 (Lombroso)30

Morally normal.....	89
Morally normal with no physical anomalies.....	62
Morally normal with physical anomalies.....	27
Morally abnormal.....	71
Morally abnormal without physical anomalies.....	22
Morally abnormal with physical anomalies.....	49
Total No. without physical anomalies.....	84

In table 39 are given the results of examinations of a number of specialists, of the cranial anomalies of 383 criminals. The most frequent anomalies are great prominence of superciliary arches, defects in development of wisdom teeth, re-

TABLE 39. (Lombroso, Bordier, Benedikt, Ten-Kate, Corre, Heger, Flesh, etc.)

In 383 Criminals. Cranial Anomalies.	Number	Per Cent
Superciliary arches and prominent frontal sinuses.....	206	58
Anomalies in wisdom teeth development.....	47	44
Pathological craniums.....	183	43
Partial or complete soudure of sutures.....	304	28
Receding forehead.....	228	26
Plagiocephaly and asymmetry.....	289	23
Great thickness of skull.....	290	43
Wormien bones.....	314	22
Abnormal cranium.....	183	21
Very simple frontal sutures.....	260	18
Prominent occipital protuberance.....	90	16
Occipital fossa.....	193	16
Increase of cranial capacity.....	232	15
Swelling of the frontal.....	906	14
Medio-frontal suture.....	169	13
Osteophytes of the clevis.....	299	12
Inca bone.....	118	10
Trocephaly.....	136	10
Small, narrow and flat forehead.....	110	9
Bone of cranium very thin.....	93	8
Anomalies in development of canine teeth.....	96	2
Subcapocephaly.....	98	6
Superposition of cranial bones.....	161	5
Oxycephaly.....	135	5

ceding forehead, etc. While doubtless such anomalies indicated in table 39 are more frequent than in non-criminal persons, yet frequency of anomalies in normal persons should be compared with those of criminals.

The general impression from table 39 is a pathological condition due to the reunion of many anomalies in the same cranium.

30. *L'homme Criminelle*, Paris, 1895.

In table 40 are given percentages of anomalies in 66 male and 60 female criminals, and in 3090 normal individuals. The anomalies are clearly more frequent in the criminals.

TABLE 40. (Lombroso, Legge, Amadei.)

66 Male and 60 Female Criminals examined	MEN			WOMEN		
	Crim- inals	Non- Crim- inals	In- sane	Crim- inals	Non- Crim- inals	Sav- ages
	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent
Asymmetry and plagiocephaly	42	20	24	21	17	
Cranial sclerosis	31	18	50	31	17	100
Fusion of suture	37	25	28	26	13	8
Metopic suture	12	9	9	5	10	5
Fossette occipital moyenne	16	4	14	3	3	26
Womien bones	59	28	68	46	20	
Receding forehead	36	18		6	10	
Prominent superciliary arches	62	25	67	29	19	100
Anomalies of lower teeth	2	6		3	0.5	40
Large jaws	37	29		25	6	
Very large jaws	10	4				100
Prognathism	34	34		32	10	100
Asymmetry of the face	25	6				
Platecephaly	22	15		33	0.1	
Frontal apophysis of the temple	3	1	2	5	0.0	12
Projection of the temporal bone	43	27				
Prominent zygomatic apophysis	30	29		7	6	
Womien bones of Pteruri	23	16	18			65
Fusion of the atlas with the occipital bone	3	8	2	3	0.0	
Foramen magnum (Anomalies)	10	2	0.5	11		

Comparing the sexes, the proportion of anomalies is much less in female than in male criminals. The insane show fewer anomalies than the criminals.

It is assumed by the specialists making this study that individuals with a large number of anomalies of the skull, which are alterations of its volume, are probably influenced in mind and sentiment by such changes.

CRANIAL ANOMALIES.

In table 41 are given the per cent of cranial anomalies in 400 Italian criminals. Plagiocephaly is the most frequent of all (32%), with Scaphocephaly (17%) and Microcephaly (17%) next in frequency.

TABLE 41. (Penta)

400 Italian Criminals Cranial Anomalies	Anomalies Per Cent
Plagiocephaly	32
Scaphocephaly	17
Microcephaly	17
Platiocephaly	7
Acrocephaly	6
Oxiocephaly	3
Trococephaly	3
Hydrocephaly	2
Clincephaly	1

TABLE 42. (Biliaknow)

190 Homicides in Russia	Per Cent
Asymmetry of cranium.....	58
Occipital protuberance.....	15
Frontal sinus.....	42
"Apoplyse mastoide".....	13
1214 Criminals in Germany (Knecht)	Number
Microcephaly.....	4
Oxiocephaly.....	118
Scaphocephaly.....	15
Prognathism.....	32
Anomalies of teeth.....	56
Anomalies of ears.....	6
Division of the uoula.....	6

Among 1214 German criminals (table 42, 2d part) only 4 were microcephalic. The most frequent anomaly was oxycephaly in 118 cases.

CRIMINAL INSANE.

In a study of 65 young criminal insane and 40 young insane, Maupaté³¹ found the results given in table 43.

TABLE 43.

Cranial Anomalies (Maupate)	65 Insane Criminals	40 Insane
	Per Cent	Per Cent
Prominent zygomas.....	52	25
Superciliary arches.....	26	18
Large jaws.....	34	42
Exaggerated brachycephaly.....	75	77
Cranial asymmetry.....	55	37
Prominent frontal bosses.....	58	54
Plagiocephaly.....	18	20
Large ears.....	9	10
Outstanding ears.....	12	32

In both classes, there is a higher per cent of exaggerated brachycephaly and frontal sinuses. The criminal insane exceed the insane in prominent zygomas (52%), superciliary arches (26%) and cranial asymmetry (55%). The insane exceed the criminal insane in plagiocephaly and outstanding ears. In table 44, Näcke finds somewhat contrary results, as to criminal characteristics, as far as women are concerned.

31. L'homme Criminelle.

TABLE 44.

Women examined. 32 (Nacke)	Black Hair	Bushy Hair
	Per Cent	Per Cent
53 convicted.....	83	51
47 under judgment.....	94	56
100 insane.....	89	39
100 normal.....	80	31

All (criminal insane and normal) do not differ materially in color of hair, the great majority having black hair.

As to anomalies in the criminal insane, table 45 shows frontal sinuses, plagiocephaly, macrocephaly and traumatism

TABLE 45.

136 Criminal Insane (Lombroso)	Per Cent
Traumatisms in the head.....	10
Submicrocephaly.....	3
Macrocephaly.....	5
Scaphocephaly.....	3
Plagiocephaly.....	10
Platycephaly.....	6
Oxycephaly.....	5
Trochocephaly.....	5
Receding forehead.....	7
Frontal sinuses.....	14
Cranial Capacity	Per Cent
1350 to 1400.....	2
1400 to 1500.....	12
1500 to 1550.....	44
1550 to 1600.....	24
1600 to 1700.....	14
1700 to 1750.....	2
Cephalic Index	Per Cent
75 to 77.....	4
77 to 80.....	4
80 to 83.....	25
83 to 90.....	59
90 to 93.....	7

in the head to predominate. From comparisons with other tables, it will be seen that the cranial anomalies of the criminal insane are less in number than in criminals generally.

As to cranial capacity, much the largest per cent (44) are from 1500 to 1550.

A still larger per cent (59) for cephalic index are from 83 to 90.

Of 100 homicides in Russia, 58 per cent showed cranial asymmetry and 42% frontal sinuses, as indicated in table 42.

ANOMALIES OF INSANE AND CRIMINALS OF FRIOUL.

TABLE 46. (Antonini and Zanon)

Atavistic and pathological anomalies.....	1428
Atavistic and pathological anomalies in criminals.....	223
Number of individuals examined.....	300
Number of criminals examined.....	30
Average of atavistic and pathologic characteristics per person.....	4.7
Average anomalies for criminals.....	7.4

Until we have a systematic anthropological examination of criminals mentally, morally and physically, we will find it difficult to make a correct diagnosis of the causes of crime. In order to make a beginning, we are giving the results of important scientific studies of criminals.

The specialists who gathered the facts in table 46, state that the region around Frioul is, on account of topographical conditions, representative of different parts of Italy and Europe.

Table 46 shows that of the 300 individuals examined there were in all 1428 stigmata of degeneration, or 4.7 per person. For the criminals the average is still higher, being 7.4.

EPILEPTICS AND CRIMINALS.

The results in table 47 are based upon a study of 410 epileptics. The anomalies are similar to those found in

TABLE 47.

	220 males Lombroso	68 males Cividalli	12 males Tonini	58 females Lombroso	52 females (Cividalli)
	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent
Ears projecting out.....	39	41	32	12	19
Prominent zygomas.....	34	42	.....	39	36
Frontal sinuses.....	28	25	32	20	9
Facial asymmetry.....	11	57	76	5	32
Cranial asymmetry.....	30	33	.....	.....	.....
Receding forehead.....	11	.....	.....	1	.....
Prognathism.....	3	.....	.....	6	.....
Microcephaly.....	19	.....	25	.....	.....
Acrocephaly.....	.....	15	16	.....	.....
Strabism.....	.....	11	16	1	9

criminals, and often in similar proportions (table 48). It is a theory held by some criminologists that epilepsy and crime are very closely related.

Comparing also the observations of a number of specialists upon 299 epileptics and upon 1001 criminals, we have

TABLE 48.

Lombroso, Cividalli, Tonnini, Roncoroui. 299 Epileptics 1001 Criminals	Epileptics Per Cent	Criminals Per Cent
Facial asymmetry.....	37	15
Large jaws.....	23	38
Outstanding ears.....	34	38
Prognathism.....	10	5
Strabism.....	15	20
Prominent zygoma.....	20	16
Cranial asymmetry.....	42	27
Platicephaly.....	27	28
Frontal sinuses large.....	29	26

table 48, where the epileptics show a much higher per cent of facial asymmetry, and the criminals, on the other hand have a much higher per cent of large jaws.

EPILEPSY.

In table 49 are given the results of measurements of height by different specialists on 410 epileptics.

TABLE 49.

410 Epileptics.	No. of persons
Average height.....	202
Less than average height.....	106
More than average height.....	102
	410

About half of them had average height, and nearly as many were above the average height as below it.

In the following table 50, however, the number of epileptics with more than average height is much greater than those with less than average height. Certain anomalies are more frequent than others, as plagiocephaly, facial asymmetry,

TABLE 50.

120 Epileptics in Asylum at Rome (Cividalli and Amati)	No. of men	No. of women
Height greater than average.....	31	25
Height less.....	11	7
Arm-reach greater than height.....	21	13
Plagiocephaly.....	23	18
Flatness of occiput.....	17	3
Low forehead.....	13	5
Prominent frontal bosses.....	19	15
Facial asymmetry.....	39	17
Prominent zygomatic arches.....	29	19
Large jaw.....	7	8
Large superciliary arches.....	18	5
Very thick hair.....	15	8
Outstanding ears.....	28	10

zygomatic arches and outstanding ears. Almost all of the 120 epileptics were more than 25 years of age. The arm-reach was greater than height in 34 cases. This is frequent in the lower races. According to the Italian specialists, the physical anomalies in epileptics and criminals occur in somewhat similar proportions.

TATTOOING.

Table 51 gives the results of a study of 1447 prisoners in Belgium, of whom 1155 were Belgians, and 292 foreigners. The total number of tattooings was 6225, 4472 for the Belgians and 1753 for foreigners. The designations in the table are based upon the meaning and form of the tattoo design. The forms are personages, emblems, inscriptions and figures.

TABLE 51. (Vervaeck)

Designation of Tattooing	Belgians	Foreigners
Profession.....	61	54
Army.....	599	164
Draving (tirage).....	466	12
Navy.....	360	186
Family.....	609	155
Friendship.....	19	6
Love.....	433	149
Lubricity.....	103	41
Sports.....	313	72
Religion.....	76	23
Patriotism.....	20	41
Politics.....	15	25
History.....	48	14
Animals.....	98	58
Vegetables.....	119	65
Phantasy.....	253	246
Criminality.....	90	74
Tattooing.....	56	32
Ornaments.....	325	279
Art.....	10	22
Point d'essai.....	61	35
Incomplete Tattooing.....	338	.....
Total	4472	1753
Averages	3.8	6.0

The average number of tattooings per individual among the foreigners is almost double that of the Belgians, according to Vervaeck, who made this study, there is no constant relation between the act of submitting to tattooing and the significance of the designs, which give expression to it. In the choice of emblems and inscriptions, the one being tattooed is influenced much by the surroundings and especially by the tattooer. Thus it is difficult to judge of the moral and mental character of a prisoner from his tattoo marks.

As to the motives for tattooing, table 52 shows that the main ones are imitation and amusement. As will be seen from this table, three-fourths of those tattooed, subsequently regret it. The most frequent place for tattooing is at the

TABLE 52. (Vervaeck)

1013 Prisoners of Belgium	
MOTIVES FOR TATTOOING	
Imitation.....	327
Amusement.....	291
Souvenir.....	82
Admiration of Tattooer.....	69
Insistence of Tattooer.....	30
Love.....	3
Lubricity.....	6
"Gaminerie".....	123
Ignorance.....	40
Drunkenness.....	20
Undetermined.....	22
Total	1013
Subsequent Regret.....	75%
Subsequent Indifference.....	15%
Subsequent Satisfaction.....	10%
AGE (1,000 persons)	
Tattooed before age 10	25
Tattooed from 11 to 15.....	137
Tattooed from 16 to 19.....	191
Tattooed from 20 to 22.....	482
Tattooed from 23 to 30.....	144
Tattooed after age of 30.....	21
PLACE OF TATTOOING (1013)	Number
At Barracks.....	313
Other military places.....	59
At home.....	197
In the street.....	153
In the smoking room.....	76
In the country.....	36
At the workshop.....	39
At the tattooer's	17
At sea	16
In school.....	13
At the market.....	7
In a mine	5
In France.....	20
In different places.....	15
Total	1013

Barracks, showing the great influence of the military service. Few regiments escape the contagion of tattooing. The great majority of the tattooed are less than 26 years of age.

In table 53 are given observations of different specialists in their studies of tattooing. The highest per cent are found in French soldiers (40%), juvenile criminals (32%), German

criminals (24%), criminals of Bergame (15%), Italian infantry (11%), delinquents of Piedmont (11%), criminals of Pavia and Turin (9%), and down to $\frac{1}{2}$ per cent.

According to L'éale, the frequency of tattooing is due more to external causes, and instead of being a sign of criminality, it is merely a result of surroundings.³³

TABLE 53. Tattooing (Lombroso, L'Homme Criminelle)

Number	Observer	Year	Number Examined	Number Tattooed	Per Cent
Italian Infantry.....	Lombroso	1863	1147	134	11
Italian Infantry.....	Baroffio	1873	2739	41	1.5
Soldiers in prison, Italian.....		1873	150	13	8
Prison of Central Alexa.....	Lombroso	1872	500	31	6
Criminals of Bergame.....	Albrigheti	1873	134	21	15
" of Pavia and Turin	Lombroso	1875	64	8	9
Turin correctional institution for children	Lombroso	1876	100	40	4
Juvenile criminals.....		1881	235	77	32
Judicial prisons of Milan.....	Tencheni	1873	650	50	7
Women criminals of Turin	Gamba		300	5	1.6
Delinquents of Piedmont.....	Marro	1883	1218	144	11
Prostitutes of Milan.....	Soressina	1866			
French soldiers, criminals.....	Lacassagne	1879	800	378	40
Condemned Italians.....	Lombroso	1880	200	1	1.05
Insane at Sienna.....	Severi	1885	1137	46	4
German criminals.....	Baer	1893	1004	240	24
German soldiers.....	Baer		490	44	9
French Insane at Toulon.....	Maraudon		600	78	13

TATTOOING IN CHILDREN.

In the prison of Lyons, France,³⁴ were found 50 young persons, of whom 38 were tattooed. There were 30 convicted of theft, 13 of vagabondage, 5 of assault and 2 of murder. Tattooing is regarded as a sign of precocity in crime. Lombroso found among 89 tattooed criminals, 66 who were tattooed between the ages of 9 and 16. Lacassagne found one-third to be tattooed before the age of 20. Battistelli at Naples found 122 tattooed before the age of 20, and 122 tattooed out of 394 minors.

The young who are tattooed usually have lived in the slums of cities, in some of which tattooing is regarded as a mark of distinction. It is said that the more vicious the conditions in which children live, the larger the number of tattooed. Tattooing is a sign of low moral condition, according to some investigators.

33. Archives L'Anthropologie, 15 aoux, 1909.

34. Le tatouage chez les enfants, E. Martin, Archives de l'Anthropologie Criminelle, Janvier. Février, 1910. Lyon et Paris.

In table 54 Ottolenghi³⁵ found 139 tattooed among 1397 minors in reformatories. Recidivists showed the highest per cent (40).

TABLE 54.

1397 minors in reformatories show 139 tattooed
29 per cent of tattooed had 3 to 5 tattoo marks
16 per cent of tattooed had 6 to 10 tattoo marks
10 per cent of tattooed had 11 to 24 tattoo marks
40 per cent of tattooed were recidivists.

Snell³⁶, in a study of 464 criminal women in Germany, found 3 per cent tattooed.

RUSSIAN WOMEN.

In table 55 are given some of the principal measurements of 160 homicides, 150 non-criminal illiterate village women and 50 non-criminal women, with education, all of Russia.

TABLE 55.

Russian Women Figures and Averages. (Madame Dr. Tarnosky)	160 Women Homicides	158 Illiterate village women	50 Women with education
	m.m.	m.m.	m.m.
Maximum length of head.....	177	180	183
Maximum width of head.....	143	144	145
Cephalix index.....	80.8	80.4	79
Maximum circumference of head.....	529	534	538
Distance between the zygomatic arches.....	109	110	112
Length of nose.....	55	56	61
Width of nose.....	29	28.9	
Length of right hand.....	182.6	183.9	
Length of left hand.....	182.8	183.6	
Circumference of chest.....	808	796	760
Abdominal circumference.....	853	819	830
Height.....	1m 548	1m 560	1m 541
Arm reach.....	1m 614	1m 646	1
Weight.....	58 kg.	56 kg.	563
Age.....	31	26	24

The table shows that the women homicides have smaller heads than the non-criminal women. The difference is especially noticeable in the maximum circumference of head, the measurement, which indicates best of any single measurement the size of the head. This gradual increase of head measurements of non-criminal women, in comparison with those of women homicides, according to Madame Dr. Tarnowsky, a Russian criminologist, indicate to a certain extent a superior and more regular development of head among non-criminal women.

35. Archives de l' Anthropologie Criminelle, XX.

36. Centralblatt für Nervenheilkunde, 1898.

It is in the signs or stigmata of degeneration, that the difference between women homicides and non-criminal women is greatest, as shown in table 56. In the opinion of Madame Tarnowsky, the presence of three or more physical signs of degeneration in the same person is an abnormal phenomenon.

TABLE 56.

Signs of Degeneration	160 Homicides Women	150 Non- criminal Women
	Per Cent	Per Cent
Head.....	106	10.66
Face.....	121.33	11.23
Teeth.....	64	22
Palate.....	28	11.33
Ears.....	34.66	6.66
Neck.....	1.87	
Members.....	3.75	

The relatively superior number of signs of degeneration among women homicides, as compared with non-criminal women, would lead one to suppose that the antecedents of women homicides would be more unfavorable than in non-criminal women, which proves to be true, as indicated in table 57.³⁷ Here alcoholism plays the most prominent role, existing in 71³⁷ per cent of the parents or grandparents of women homicides and in 16 per cent in the case of non-criminal women.

TABLE 57.

Antecedents Russian Women	160 Women Homicides	150 Non- criminal Women	50 Women of Education
	Per Cent	Per Cent	Per Cent
Alcoholism in parents.....	71	16	6
Mental trouble, epilepsy, hysteria in parents.....	10		2
Hysteria in parents.....	10		2
Tuberculosis, syphilis and other diseases in parents.....	32	15	10
Total of unfavorable ante- cedents in 98 families.....	61	19	18

Taking the total number of unfavorable antecedents in 98 families of women homicides, and comparing the proportion (61 per cent) with that of non-criminal women (19 per cent), we see that there are more than three times as many in the

37. It was only possible to obtain data in 78 families, also see Mme. Tarnosky's work, "Les Femmes Homicides," Felix Alcau, Paris, 1908. Reviewed by writer in Journal Amer. Institute Criminal Law and Criminology, Nov. 1910, Chicago. Page 666-668.

former as in the latter. It might be said, also, that defects of the head, which are the main ones in table 57, are regarded as more significant than defects in other parts of the body.

FEMALE CRIMINALS IN ROUMANIA.

Table 58 gives the measurements of 150 prostitutes, 50 women criminals, and 50 normal young women (24 to 25 years of age) of Roumania.

It is well known that women commit much less crime than men. It has been estimated that women commit about 8 per cent of crime in Italy, 11 in Spain, 14 in Austria, 26 in France, and 10 in Great Britain. According to some this disproportion is accompanied with a similar disproportion of physical anomalies between men and women. Others think that prostitution should be regarded as a crime, in which case, this disproportion as to crime is very much modified. Some of the reasons why women commit less crime than men are due to their physical inferiority; (Lombroso in part and Naecke) to their intellectual inferiority (Lombroso); according to Colajanni, it is the economic condition of the woman. Another specialist says it is because woman is less active in public life, and another (Tarde) says it is woman's superiority.

Table 58 also gives the color of hair and eyes. There are no marked difference between the classes of women given in the table.

TABLE 58. Ages from 24 to 25.

Female Crime Roumania	150 Prostitutes	50 Criminals	50 Normals
Height.....	154	155	155
Arm reach.....	156	154	156
Circumference of chest..	85.5	85.3	85.3
Bezygomatic diameter	13.5	13.8	13.5
Height of head.....	12.7	12.9	12.5
Length of face.....	16.9	16.9	16.5
Length of ear.....	52	54	56
Width of ear.....	32	32	34
Dolichocephaly.....	3	4	4
Mesocephaly.....	6	3	3
Brachycephaly.....	141	43	43
HAIR			
Light.....	36	10	8
Medium.....	65	24	28
Dark.....	49	16	14
Red.....	8	8	7
EYES			
Light.....	30	7	7
Medium.....	67	19	20
Dark.....	45	16	16

STIGMATA OF DEGENERATION.

In table 59 are given signs of degeneration found among 275 recidivists:

TABLE 59.

Mirabelli (38) studied 275 Recidivists and found:
47% of low stature
80% with height less than arm reach
10% left-handed
6% ambidextrous
4% tattooed

TABLE 60.

Winter (39) in a study of 63 Irish Criminals compared with an equal number of normal Irish men of New York, the following:
11 ears of Wildermuth
12 ears of Staal
3 ears of Darwin
73 criminals with cranial asymmetry
11 epileptics
32 had hallucinations
20 per cent had anomalies in face and palate

TABLE 61.

Herdlika (40) studied 1,000 children in a Reformatory of New York, and found:
12 per cent anomalies in boys
5 per cent anomalies in girls
12 per cent anomalies in negro boys
3 per cent anomalies in negro girls
17 per cent were serious
70 per cent of little importance

In Table 61, it will be noted that anomalies are much more frequent in boys than girls among both white and negroes. The large majority of the anomalies were of little significance.

PROMINENTIA SQUAMAE OCCIPITIS⁴¹.

The prominentia squamae occipitis, described by Schnepf for the first time in 1853, is shown by table 62, to be more frequent in normal than abnormal persons. There is much difference of opinion as to the significance of this anomaly.

TABLE 62.

Prominentia Squamae Occipitis (Lorenzo Gualino)	Skulls Examined	Number with prominentia	Per Cent with prominentia
Normal persons.....	932	203	21.27
Idiots.....	71	7	9.8
Criminal women.....	381	31	8.1
Criminal men.....	264	33	12.5
Epileptics.....	43	6	13.9
Insane in general.....	183	35	19.1
Inferior races.....	117	13	11.1

38. Revista Universal di Medicina, 1899.

39. Bulletin of State Hospitals of New York, 1895.

40. Anthropological Investigations, New York, 1899.

41. Schnepf, Observation d'idiotie, annales med-psychol, 1852; also Tamburini e Morselli, Revista speriment. di Freniatria, 1875; Keep, Schadelldifformita, Irrenfreund, 1872; Mui-gazzini, Revista sperimentale di Freniatria, 1882; Tarnosky, Etude Anthropométrique sur les prostituées, Paris, 1889; Ferri, L'omicidio, Torino, 1895; Marro caratteri dei delinquenti, Torino, 1887, Le Double, Traité des variations des os du crâne, Paris, 1903.

Idiots show the lowest per cent. That is, it might be shown through further investigation, that a low per cent of this anomaly may be as unfavorable a sign, as a high per cent of some other anomalies. Anomalies are not necessarily an unfavorable indication, and in some instances, as above, may even be favorable signs. But as a rule they are regarded as detrimental.

WOUNDS OF THE HEART BY SHARP INSTRUMENTS.

Table 63 gives the result of a study of wounds of the heart by sharp instruments, showing the location of the wounds

TABLE 63. (235 cases) Malausenna 42.

LOCATION OF WOUND	No.	Per Cent
Right ventricle.....	93	41
Left ventricle.....	69	29
Right auricle.....	17	7
Left auricle.....	4	1
Points undetermined.....	52	22
Total	235	100

and fatality and length of life of victim after wound. The table includes the observations of several specialists (Fisher, Richter, Loison). The right ventricle is the most frequently wounded (41%); the left ventricle is next in order of frequency (29%). In regard to the length of life after

TABLE 64.

Length of life after wound	Right Ventricle		Left Ventricle		Right Auricle		Left Auricle		Points undetermined
	No.	%	No.	%	No.	%	No.	%	No.
Few minutes to one hour	12		5		4		2		4
1 hour to 6 hours.....	9	31	10	38	2	64	0	75	3
6 hours to 24 hours	7		0		5		1		4
1 day to 1 month.....	48		32		5		1		18
1 month to one year.....	2		4		0		0		7
Several years.....	9		2		0		0		5
Length of survival unknown..	6		6		1		0		7
	93		69		17		4		52

infliction of wound, 28 victims, or 31%, die within a day and 48 within a month. In certain medico-legal questions, this table might be of great value. The gravity of the wounds increases from the right ventricle to the left auricle.

NOTES ON THE HISTORY OF PSYCHIATRY VI.*

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IN my preceding articles I have gathered together some notes on the literature of psychiatry from French and German sources. I began with some chapters from Freidreich's History of Psychiatry, then began the translation of the Psychiatry of the Ancients by F. Falk of Berlin.

In the present communication I continue the translation of Falk's important study. It has never been made available to English readers notwithstanding its scholarly character and completeness.

The last installment of the translation went to page 476 of the original in the *Allgemeine Zeitschrift für Psychiatrie*. The present portion continues from page 476 to 507, up to the work of Galen.

CICERO.—It is remarkable that he who next claims our consideration is no physician, but a layman, Cicero. He also has not advanced psychiatry in any definite manner but his numerous writings deserve to be mentioned in this place. We find them in the Tusculan Disputation, III, 5. After he had explained, that contrary to the Greeks (Stoics), who called the passions diseases of the soul (παθή) we must distinguish perturbations of the mind from the diseases of the body,¹ he continues, that the passions after all, fundamentally belong to insanity or to madness, as in their condition of mental health, calmness and equilibrium is absent; and one could rightly say of people in such conditions, that they are beside themselves, or "out

*Continued from page 668.

¹I am aware that the introduction of such foreign expression does not add to the writer's style, but this procedure is less harmful and does not interfere with clarity.

of one's mind." The weakminded, stupid, are in the same manner patients just as the demented and insane.² What the Greeks call Mania is difficult to say. "We define it much better than they say "Cicero," for we distinguish this madness (insania) which, being allied to folly, is more extensive, from what we call furor, or raving.³ The Greeks are willing to do the same and call our furor μελαγχολία. Just as if the reason were only affected by black bile and not disturbed as often by emotions of all kinds as we see in the raving of Athamas and Orestes in dramatic literature. If furor is more than insanity, the wise man as previously mentioned cannot very likely become attacked either by furor or by insanity.⁴

The importance of the juices for the origin of certain diseases has been restricted by Cicero. He separates true insanity (Wahnsinn) from those mental diseases to which imbecility and dementia in the wide sense belong, as examples of which he refers to the cases of raving in mythology. A not uninteresting place for us as physicians is that in which he refers to the history of the Roman administration of law, where by the law of the "Twelve Tables" the raving man is deprived of the personal management of his property, (Domini rerum suarum non poterant isre) just so as in that time were the spendthrifts, (Prodigi).⁵ Cicero emphasizes, that according to the words of the law it is not the insane who are interdicted, though these although not possessing their full mental power, (constantis id est sanitate curescentes,) are able to attend to some duties which require not much sagacity,⁶ whereas the furiosi are totally deprived of the use of their senses.

So much for the interpretations of Cicero, the mention

²Amentis idemque dementis. Wolf explains amentis as absence of the mens; dementis, a false direction of the same.

³Quoted from Tusculan Dissertations, tr. by Yonge.

⁴In Yonge's translation the phrase reads "Thus we say Athamas, Alcmaeon, Ajax, and Orestes were raving (furere) because a person afflicted in this manner was not allowed by the twelve tables to have the management of his own affairs; therefore the words are not, if he is mad "insania" but, if he begins to be raving "furiosus," for they looked upon madness to be an unsettled humor, that proceeded from not being of sound mind; yet such a person might perform his ordinary duties, and discharge the usual and customary requirements of life, but, the Greeks considered one that was raving as afflicted with a total blindness of the mind, which notwithstanding it is allowed to be greater than madness, is nevertheless of such a nature, that a wise man may be subject to raving (furor) but cannot possibly be afflicted by insanity (insania).

⁵Hugo: Lehrbuch eines civilistischen Cursus. Bd. III. Geschichte des römischen Rechtes, pp. 83 and 180.

⁶Mediocrisatem officiorum et vitae communem cultum atque usitatum tueri.

of whose name perhaps may seem a digression. It cannot be denied that a real profit hardly could be obtained from him; however I thought it necessary for the sake of completeness to refer to him. A contemporary and friend of Cicero however promises to offer us more.

ASCLEPIADES.⁷—If we review the fragments of Asclepiades of Prusa⁸ we, first of all, meet with phrenitis in the study of his special medical doctrines. Gumpert has called attention to the fact that one ought not to accept the description of this disease which with the other doctrines of Asclepiades are found especially in Caelius Aurelianus, without critical reserve, even though the descriptions are very stimulating. As every critic is ready to show by numerous examples that the theories of Asclepiades were not quite clear to Caelius himself, and furthermore, Caelius often confused the original picture of diseases given by Asclepiades by his own arbitrary coloring and practically wiped them out by his own definitions.

If we now thoroughly examine Gumpert's critical studies we may obtain the following:

In the first place it should be recalled that according to Asclepiades, the head of the Methodist School, the normal life processes depend upon the activity of atoms and that the origin of disease is to be referred to disturbances in the quantity and formation of these atoms (*οῦτοι*). The wording of the definition of phrenitis which he gives us becomes clearer therefore, even though it contributes nothing to any explanation of the disease. This is: Phrenitis is an accumulation and stoppage of the atoms within the meninges,⁹ which is idiopathic (*sine consensu*) with absence of mind and with fever. Asclepiades himself, as remarked by Aurelianus, completed this definition by adding "with fever," as contrasting with those cases in which insanity exists without fever, as for instance after eating opium, mandragora, hyoscyamus or as in those in whom immoderate anger or great anxiety brought about morbid excitement, often of a superlative degree, or others

⁷See with reference to Asclepiades of Bithynia an article on the Psychiatry of the Augustan Era. (Jelliffe) *John's Hopkins Bulletin*, 1908.

⁸Bithyni fragmenta. Digessit et curavit. an. Gumpert. Vinar, 1794. This work may be obtained in the Library of the N. Y. Academy of Medicine. (J.)

⁹*Corpuscolorum statio sine obtrusio in cerebri membranis.*

who are reduced to gloomy sadness, and finally in contrast to those afflicted with epileptic attacks. But phrenitis must be idiopathic because delirium may be present during the course of a pleurisy, or a pneumonia, especially during the acute stage of the disease on the 7th or 8th day, but this should not be confused with phrenitis. The description of this disease varies but little from that given by Hippocrates, but Asclepiades has devoted special attention to the sensorium.

It is characteristic, that Asclepiades is not willing to select any organ in the body for the seat of the soul yet¹⁰ his definition as well as his therapy of phrenitis and of chronic mental diseases in general all indicate that the brain is the part affected in such disorders.

Concerning his therapy of phrenitis we learn that the general customary remedies such as clysmata and sour honey upon the shaven head are unsuitable for this disease. The latter act as irritants and cause a serious flow to the head whereby the meninges becomes still more swollen. He asks why one should cover the head with wool after shaving? The natural covering, the hair, is the best. Bleeding is also out of place since it thickens the blood and does not permit the fine atoms, which are essential in the etiology of phrenitis, to be removed from the body. Furthermore Asclepiades never permits bleeding during the acute stages of a fever but only after a remission.

The custom of placing the patient in a dark room is severely criticised since the patient is tormented by sleeplessness and by the active hallucinations, which themselves are created by the diseased mind as an external impression cannot so influence the mind.¹¹ A lighted room prevents the patient from sinking wholly into his false perceptions.¹² The power of the same is weakened by external sensory stimuli just as the brightest torchlight fades in the daylight. It is certainly a very interesting therapeutic intimation, and one of great value, that Asclepiades should have called attention to the

10Caelius Aurelianus, *De acutorum morbis*, lib. I. XIV. *Regnum animae aliquo in parte corporis constitutam.* (Asclepiades) negat. The definition, which Asclepiades gives concerning the soul runs as follows: *Nihil aliud anima quam sensuum omnium coetus* (ibid): yet all the more it should be directed to the brain, as the seat of mental activity.

11Quoniam nullae res externae in sensus cadere possunt.

12Impedit quomodo toti sint imaginibus.

central origin of hallucinations. He had already distinguished hallucinations in the narrow sense (our present day terms are naturally not used by him) from illusions, anomalies, in which the patient may receive correct sensory impressions, but is unable to form a correct judgment of the same¹³ as for example Hercules who mistook his wife and Orestes who looked upon his sister as a Fury.

For phrenitis Asclepiades recommended strong smelling remedies, such as Musk, Peucedanum, Raute, Galbanum, Ammonia, also sternutatories; and finally the application of water with frictions, which latter he administered in a variety of ways. All of these he used in conjunction with at first a limited then later with a carefully graded stimulating diet, including especially wine. The treatment of lethargy is similar, only more energetic. Lethargy, according to a definition of a pupil of Asclepiades, is a contrast picture to the agitated form of phrenitis delirium developing depressions and extreme stupor but it may also develop out of phrenitis.

Further as to the treatment of chronic insanities: It is said that Asclepiades was the first to have recommended music as an important mode of treatment for phrenitis (*Phreniticorum mentes morbo turbatos saepe per symphoniam suae naturae tradit*: the minds of the phrenitics upset by their disease he often caused to return to their natural state by means of music [S.J.]) We find it in Censorinus, chap. 12. Caelius describes in extenso (1. morb. chron.¹⁴ 1. 5.) the proceedings of Asclepiades according to whom one modulates the tones. The Phrygic measures, by reason of their cheerfulness and lightness are suitable to arouse the depressed patients, whereas more serious music is recommended for the treatment of those who through their childish laughter show the abnormal condition of their mind. For the first time we here have a psychic remedy for mental diseases; an important progress at least in the therapeutics of psychiatry.

On the other hand we read that Asclepiades advises that the excited may have to be subjected to physical restraint but

¹³Ex veris visis ducentes quidam mentis errorem, falsitate magis afficiantur. Aurl. Ibid. ch. XII.

¹⁴See the study of Psychiatry of the time of Augustus already referred to where later material has shown how important Asclepiades has been for the development of psychiatry.

that other treatments, such as bathing and blood letting, should not be neglected. Thus two dissimilar acquisitions may be connected with Asclepiades. It is probable however, concerning physical restraint, that he only sanctioned the methods which were in general use at his time.

To say more about the importance of Asclepiades to psychiatry is not permitted from the fragments of his writings left to us. We must accept however, that he made a great impress upon psychiatry when we recall the great admiration with which his contemporaries and his immediate followers (others than Aurelianus) regarded him and much that appeared later as original may perhaps be nothing but what he himself had previously written.

CELSUS.—A Cornelius Celsus is one of the admirers of Asclepiades. He is an important writer for our purposes. His teachings concerning mental disease are to be found in XVIII chapter of the III book.¹⁵

After discussing in a previous paragraph the therapy of the different kind of fevers, Celsus passes to these diseases, which in his opinion cannot be referred to any definite organ. He conceives mental diseases as general afflictions and makes three groups of the same.¹⁶

Phrenitis once more comes first. It is described as a febrile disease and must not be confused with the delirium, which appears in the height of several illnesses, which latter are without significance, lasting a short time and disappearing with the original disease and requiring no special therapy. Those are suffering from phrenitis, who continue to show an absence of the mind (dementia) or in whom empty visions (vanae imagines) appear although complete raving (Irreden)

¹⁵See No. II. of these Notes on Psychiatry, Alienist and Neurologist, February 1911, for complete translation of this chapter and also the paper on Augustan Psychiatry.

¹⁶*Tri genera sunt insaniae.* Insania appears therefore as a general term for insanity. Fleming, (see translation of this article of Fleming in Notes on Psychiatry, Jelliffe, No. II., February 1911, Alienist and Neurologist.) shows that Celsus totally separates mental diseases from the morbi qui nascuntur a capite, since those will be discussed in the II. Chapter of his fourth book. From the wording of this sentence it is not quite clear, whether those diseases are meant which are due to purely extracranial disturbance. His own description (hydrocephals) makes this conjecture not improbable. Humor cutem inflat atque intumescit et prementi digito cedit; here the Hippocratic description of hydrocephalus with the serum-accumulation in the cranial fossa is evident: *peri noudon*. lib. II. sect. V.) Scheller (translation of Celsus, Th. I. pg. 244) does not believe that later physicians had a different opinion concerning the seat of hydrocephalus and is inclined to accept that Celsus has made a mistake in mentioning these affections.

has not commenced. We shall meet with the expression "vanæ imagines" again in the chronic forms and shall discuss its importance later. If the patient gives way to these false perceptions the disease is completely developed. It then shows many different phenomena. One patient is hilarious, another is sad; one is easy to keep quiet, he is delirious only in language, another jumps about and becomes violent. In others the disease disguises itself (*artes adhibent*) and the patients do evil while apparently in perfect health, yet with most deceitful deliberation. Such however get unmasked during the further course. Only with the greatest precaution should one yield to their pleadings to free them from their restraint. This ought to apply only to the very dangerous however.

Celsus further relates how the ancients had always placed such patients in dark rooms and that only Asclepiades had objected to this proceeding. According to Celsus, Asclepiades went too far in this when he saw that one rule does not apply to all; one patient needs light, another darkness. No drugs should be given during the height of the fever as such only increase it, in this stage only should the patient be restrained by tying, later it may become necessary to treat them rigorously. He does not approve of Asclepiades in his caution regarding bleeding and of the drugs used by him in general. He recommends some others, namely crocus ointment, to be rubbed upon the shaven head. Opium and henbane he gave internally with special indications.¹⁷ It is important in all these patients to reckon with the personality, to treat them by psychical means.¹⁸ Some have to be freed from their groundless fear; to a very wealthy man who was afraid he was going to die of starvation one constantly pictures before him a rich inheritance. The raving must be prevented from doing harm, if needs be by punishment; silly laughter must be met by abusive terms; morose and depressed thoughts must be driven away,¹⁹ for which noisy music is very suitable. Some patients are better agreed with than opposed; they have to be led back very gradually to reason. Educated patients

¹⁷Some remedies are useful in threatening danger, otherwise they have to be avoided.

¹⁸*Animos genere pro cuiusque natura.*

¹⁹*Discutiendæ tristes cogitationes.*

should have books and be forced to repeat exactly what they learned. Those who refuse to eat have to be placed among those who are eating. Great attention has to be given to sleeplessness, for which Asclepiades has recommended massage.²⁰ Exercise after meals and the splashing of a nearby fountain, and other similar procedures (for instance swinging in a hammock), also produce sleep. Finally narcotics are advisable but with caution, not to produce too lengthy a slumber—the last sleep. Celsus finally takes up a careful consideration of dietary regulations.

All in all these are certainly very significant therapeutic measures. Asclepiades had already recommended music as especially valuable for certain forms of disease. Meanwhile Celsus multiplied the psychic remedies and specialized their indication. He is all the more to be praised as he did not lay too much stress upon these forms of treatment alone, but applied them in connection with a somatic, especially dietetic, therapy. When he recommends coercive measures, he follows Asclepiades, who also permitted them in the same way, but only in certain, namely the disturbed, cases. The therapeutic prescriptions of Celsus should certainly serve as a guide, even if they are not applicable in the treatment of acute febrile diseases. One is inclined to ask, of what use are such remedies in acute fevers, although their value in chronic psychoses no one can deny even at the present time. Why use reading, music, conversation in acute fevers?

Flemming is inclined to conclude from those measures that Celsus personally never saw any phrenitics. It has often been asserted that Celsus can only be considered as an industrious compiler, but not a practitioner of rich personal experiences. How far this opinion in general may be confirmed is not necessary for us to discuss. It can hardly be accepted that Celsus had taken his view concerning phrenitis from the works of other physicians of earlier or even his own times. He opposes the views of Asclepiades in several places and supports his objections, if not from his own experience, from the statements of those who ought to know. The opinion, that perhaps

²⁰ If applied too rigorously it causes lethargy.

conditions secondary to phrenitis were meant, is also referred to by Flemming, but this falls, since no disorders consecutive to phrenitis are described. To transpose these statements to other parts of his books, as has been suggested by certain authors, does not seem to be justified in view of the general belief concerning these writings. In my own opinion the matter becomes a little clearer, if we accept that the therapeutic measures of Celsus do not apply exclusively to phrenitis but are meant also for all forms of insanity, and furthermore that one is not enabled to come to a distinct judgment regarding the nature of phrenitis from the precise but inadequate description as given by Celsus. It does not correspond to the disease phrenitis as found in Hippocrates;—that is, an affection in which the condition of the sensorium is not sufficiently explained by the numerous bodily symptoms, but the picture of phrenitis by Celsus is that of an acute delirium similar to that described by recent authors. That this condition may be accompanied by fever cannot be wondered at. I will not urge this point any further however.²¹

According to Celsus a second form of mental disease is chronic, (*spatium longum recipit.*) It begins without fever, and during its course only occasionally shows temperature alterations. Briefly stated his description runs as follows: The disease consists of sadness, seemingly due to black bile. The therapy is bleeding, restrictions of diet, cathartics and emetics, massage, active exercise, furthermore psychical methods are necessary. The physician should avoid all causes for anxiety, cheer the patients, divert their attention by stories and such games as have amused them when they were well; the works of the patient, if any exist, ought to be praised and brought to view and to make them understood how to find occasion for happiness even from depressing circumstances. The concurrent fever requires a therapy similar to that for all

²¹If Celsus represents *morbis cardiacus* as one of the outcomes of phrenitis, caused perhaps by the physician, at least by his dietetic regulations, attention may be called to the fact that many theories regarding the heart have appeared and to increase this is not our desire. From the therapy and definition of the affections, which reads in the text: *nimia imbecillitas corporis quod stomacho languente immodico sudore digeritur*, I agree with the opinion of Scheller (op. citat page 209) who maintains that the *morbis cardiacus* of Celsus (the description of the disease is not uniform among the various authors) is not distinctly characteristic of the disease, but is only a symptom, showing the gravest physical exhaustion; the stimulating treatment seems therefore necessary.

other fevers, which has been mentioned and previously discussed.

A third form of insanity is the most tedious, but is not dangerous to life. It attacks mostly strong constitutions, and appears under two forms. One case (Ajax and Orestes are mentioned as examples) is described as: *imaginibus, non mente falluntur*, which Scheller translates: "They have wrong ideas," whereas Flemming makes it: "The normal mental activities of these patients are misled by visions." The latter is more correct since according to Latin authors "*imagines*" has the significance of hallucination. It seems strikingly suggestive that patients under the influence of hallucination should be described as belonging to a special class. Did he have the hallucinatory insanity of later writers in mind or did Celsus understand by this class those patients under the influence of isolated delusions (fixed idea), but who otherwise were (apparently) normal. The probability that "*images*" means not only a wrong perception, but also delusional formation, cannot be dismissed.

Morel also believed, if I interpret him correctly, in his discussion of Celsus, that this author here refers to a partial insanity. The opinion of Flemming that these forms represent first stages of insanity cannot be supported.²² The therapy of such conditions is antiphlogistic; emetics and purgatives disguised by mixing with bread are to be given.

The second class of these patients is quite different. Celsus remarks concerning them: "*animo desipiunt.*" If these are not willing to listen to well intended advices, and are indecent in their words and actions they may be punished by depriving them of food, by restraint or by beating. They should be forced to take care of themselves and also should be frightened occasionally unexpectedly. Almost any sudden emotional shock acts advantageously, but such are more suitable for cheerful patients of this kind, whereas for the depressed cold frictions with sponging is advisable. As soon as the mind

22 Happy "*imagines*" has a better prognosis than sad ones. Flemming rightly calls attention to the fact that if this refers to chronic psychoses it is in need of modification. At any rate he would correct Celsus so far as the chronic cases are concerned. Furthermore it is a reproduction of the Aphorisms of Hippocrates, z, a, ng, the last of which refers only to fever delirium, and not so doubtfully as Flemming maintains.

is abstracted from its morbid direction recovery is possible.

If we consider the description and the favorable prognosis it appears probable, that no single distinct form is meant, but that various kinds are mixed by the author. For all mental diseases bodily exercise and a careful selection of the diet is advised. They should always be under observation and by those who are agreeable to them. A new therapeutic suggestion is of great interest, namely that a change of climate is desirable and that following convalescence such patients should travel every year.

At the end of this chapter we find the words: "*raro sed aliquando tamen a mente delirium nascitur.*" Does the author thereby mean that a depressive, melancholic state of mind can later produce a condition of violent excitement or of frenzy? Nevertheless he declares, that such patients are like the maniacal in their external appearance (*specie similes*) and need the same regime. If we do not read too much into the text, we have to say that this shows an extremely close study of these forms of disease.²³

I cannot understand how Flemming happens to relate the statement, chapter XXVI of the III book, concerning a stupid melancholic form to *melancholia attonita*. It runs as follows: *Attonitos quoque raro videmus, quorum et corpus et mens stupet; fit interdum ictu fulminis, interdum morbo: αποπλησιαν hanc Graeci appellant.* The words which follow in the chapter of body paralyses, mention however, that in consequence of an apoplectic stroke, or by lightening, the bodily and mental functions become paralysed. Celsus, just as little as we, relates these conditions to mental disease. We term them just as the Greeks did, *apoplexies*.²⁴

Of what value have the psychiatric chapters of Celsus?

In the first place he has given a connected, and in its way, a complete chapter on mental disturbances, separated from all other diseases of the body. Acquainted as he was with the Hippocratic doctrine, that mental diseases are brain afflic-

²³Flemming seems to have overlooked this place, or else he does not think it especially important; in his previously cited papers he pays no attention to it.

²⁴The VII chapter of the III book to which Lippman refers, only mentions those symptoms which are related to the delirium. They are exact copies of the words of Hippocrates and refer only to fever delirium.

tions, nevertheless he does not explain why he should depart from these teachings. The importance which Hippocrates ascribes to black bile, is admitted by him, and with reservations, only for the depressed forms. To him we also must look as the source of the present day application of the word melancholia. Although he primarily makes an effort to separate single forms, yet his descriptions are not as lucid as those of Hippocrates. In opposition to Flemming, who counts it to the credit of Celsus to have recognized in the chronic mental diseases the analogues of acute morbid illness, I would state that Celsus rather considers those processes different in their nature. Hippocrates did not overlook their internal relationships. In his prognostics Celsus is very sanguine; it almost seems as if he admits the possibility of a complete cure in all cases; nowhere does he mention an unfavorable end, only rarely a chronic course is described. We cannot expect from him a detailed discussion of feeble mindedness even though he reckons it with insanity, since he only regards those diseases as chronic which come under medical treatment. As in all his writings, so also in these chapters, therapy is especially treated by Celsus. We find detailed therapeutic prescriptions for acute and chronic processes. The choice of single psychical remedies and their combination with a dietetic medicinal regimen is very skillful. The latter are amplifications, often only mere repetitions, of Hippocratic rules.

His instructions concerning the conduct of the physician and his attitude to the delusional ideas of the patient are, generally speaking, useful. When he advises punishment and very strong coercive measures for some patients, although he may have failed to erect for himself an honorable monument in the hearts of the present day psychiatrists, yet as we shall see, the physicians of antiquity did not all approve of coercive measures.

But at all events Celsus has not followed blindly the traditional notions obtained by him concerning mental diseases, but has taken them up critically and has modified them in accordance with personal experience.

PLINY.—Once more I am obliged to interrupt the line of physicians, only slightly however, to say a few words concern-

ing the polyhistorian, C. Pliny, Jr. In his "Natural History" it is known that he has made some observations in all of the conceivable scientific fields, and thus I had expected to find some grain of psychiatric wisdom in his material. My expectations have not been fulfilled although I have at hand the excellent review of the text by Sillig.²⁵ We find all kinds of herbs praised for the cure of insanity and melancholy, chiefly again hellebore and mandragora, but he does not express himself as to the nature of such affections. He too vindicates (2. Lib. XI. 193) the black bile which, among other things, can produce insanity. For melancholic and mente capti he recommends the worship of Venus and also mentions the favorable effect on insanity of the waters of Sinassa in the Campania.²⁶ The heart, he says, is the seat of the intellect, (mens) but it is influenced however by the brain: hanc habent sensus arcem, huc venarum omnis a corde vis tendit, huc desinit, hoc columen altissimum, hic mentis est regimen (Lib. CI. 134).

ARETAEUS.—How different is the importance of his younger contemporary, Aretaeus of Cappadocia.

Aretaeus deals with the symptomatology as well as the therapy of mental diseases directly with the chapters concerning epilepsy and commences with the *μελαγχολία*.²⁷

The descriptions are precise and striking; his observations taken from life, the pictures of the diseases plastic, so that we can only regret to see once more the unfortunate theory of the black bile appear.²⁸ In acute as in chronic diseases Aretaeus attaches great importance to the black bile. The effects differ according to the organs to which it flows. If to the stomach and diaphragm²⁹ *μελαγχολίη*, in a narrow sense, occurs; the diaphragm and the heart being regarded also by Aretaeus as the seat of intellect.³⁰

25 C. Plinii secundi naturalis historiae, lib. XXXVI. recensuit et commentariis criticis indicibusque struxit Julius Sillig, Homburg et Gothae, 1853.

26 Sinuessanae aquae sterilitatem feminarum et virorum insaniam abolere produntur.

27 *Peri aition chai semeion chronion padon bibl-a cheph. e.*

28 I am often tempted to reproduce the text literally; but as that is not possible, would urgently recommend the reading of the original.

29 Here evacuation through the intestines may even appear as a vicarious menstruation.

30 *Causae acutorum morb. lib. cpt. Cfr. Sprengel: Versuch einer pragmatischen Geschichte der Medizin, Bd. II. pg. 114, Zeitschr. f. Psych. XXIII, 5.* An affection of the stomach shows itself by dilation as also by the development and belching of bad smelling gas. Hence the word *phusodes* as a symptom of melancholicos.

The disturbance of feeling, γυωμη συητρεπειν, is so characteristic, that Aretaeus defines it briefly: μελαγχολια εστι αζυμη επι μη φανασιανεν πυρετον.

We must translate this more in detail. Melancholy is a depression with or in, a definite (delusional) circle of ideas, without any general bodily febrile reaction.

If Celsus was inclined to grant the influence of black bile in the origin of such depressive forms, Aretaeus limited the term melancholy to those forms, which have still remained up to the present time, (1866) although the theory of the origin as to the name is buried. The delusional ideas differ according to the various categories.³¹ Some are afraid of poison, προς φαρμαχην νποπτοι, others are misanthropic and retire into solitude; again others commit suicide; finally of another it is reported: ες δαιοιδαιμοση τρεπυται.

Ermerins³² translates thus briefly: Superstitione capiuntur. Without entering into any discussion, is it possible that Aretaeus had in mind patients, whose delusional ideas were of being possessed by demons. Have we here that peculiar form of expression, of a melancholic state of mind, which later authors have called daemomo-melancholia.

The beginning of melancholy shows itself by a striking change in character. The patient becomes peevish, depressed without ground, easily excitable. Sleeplessness and bad dreams appear, whose contents already forebode the character of the after-coming delirium. Again the general feeling tone is changeable from the beginning. Now malevolent and avaricious, the patient becomes kind and generous; later they avoid contact with mankind and wish to die. Externally they show poor nourishment, the symptoms of which are strikingly described by Aretaeus. Bleeding, even in weak individuals,³³ to empty the liver, as this is the source of the blood and the bile, both of which nourish melancholy, is advocated.

Cupping-glasses, with cataplasms upon the epigastric region and of course hellebore internally, these are all praised. In the matter of diet, at least at the end of the first stages,

³¹ Melancholicoi de such epi eni eidei ezasoi.

³² Traj. ad. Rhen. 1847 pg. 321, as well as Kuhn: Medicin. Graecor: Opera quae extant. Ed. C. G. Kuhn, Vol. XXIV, 1828, pg. 75.

³³ From the right elbow.

Aretaeus is not less rigorous than his predecessors.

By such measures (therapy is thoroughly treated in the original) according to Aretaeus, the malady may be removed, yet he himself admits that it is impossible to lead all patients to recovery. The physician would in such events be more powerful than a god himself, but he may be able to mitigate the agony or at least bring about a remission.

Relapses occur very frequently; one must try an energetic hellebore cure to prevent them or use Hiera (an aloes preparation) methodically. In all cases one should carefully watch suppression of the menses or hemorrhoids, and restore these bloody discharges. If one has employed all remedies fruitlessly, he may relinquish all further treatment, and may excuse himself to the patient as medically powerless (a peculiar proposition) or one can keep on trying those artful resources until the end which may mitigate the effects of the disorder.

Since Aretaeus says nothing about psychical methods of treatment in his chapter on melancholy it may be inferred that he was not willing to accept psychic causes for insanity. Thus he speaks of a story, according to which a young man who became melancholy from love. He had been given up by his physician but was restored through love. Aretaeus explains the case as follows: The youth was in love and found his affection not returned. He therefore became out of humor, displeased and appeared to his friends, who did not know the reason of his ill-humor, to be melancholic. But as soon as the maiden listened to him, he forgot his troubles and again became cheerful. In this sense love had been effective as a cure.³⁴

Unfavorable complications and terminal stages of melancholy were well known to Aretaeus. Apart from the fact that mental disease may be incurable, it may be associated with convulsions, but he does not mention what kind of convulsions is meant. I must remark that the connection between epilepsy and mental diseases already referred to in precise form by Hippocrates, found an attentive observer in Aretaeus. As

³⁴On this occasion I am reminded of an anecdote, which is well known, also by non-medical authors. According to this tale Erasistratus recognized that the Son of King Seleukus had fallen in love with his step-mother and thus had become melancholy. The cure was effected by the resignation of the King.

the black bile is said to be guilty of melancholy so mucus is the cause of epilepsy. Both diseases begin with headache and dizziness, wherefore both of the nerve symptoms whenever they occur should not be undervalued. Continued epilepsy may lead to fury; *εστρεψε διονοςος κοτε κοτε κοιγνωμην ες μανιην.*

Such also can cause a continuous depressed state of mind. Finally epilepsy may lead to dementia. *υποτει νεταικοτε καιτην διανοιαν η νονος εστα πανια μωραινειν.*

Long continued melancholy may also produce paralysis. (*παρалуσις.*) I hardly like to accept, that bodily paralysis is here referred to. In the paragraph: *περι παραλνοε (περι αιτιων και δημειων χρονιων παζων κεφ.)* he well defines paralysis as a loss of motion in contrast to apoplexy in which consciousness, sensation and motion are gone, and attributes such causes in addition as injurious.

Excesse in Baccho et Venere, also violent emotions, depression, fear, grief and, in children, also fright. We do not find any description of a distinct form of paralysis said to be associated with melancholy. There is not the slightest reason to associate the words mentioned with that symptom complex which we at the present time designate as paralysis of the insane. In Aretaeus we find no description corresponding with that symptom complex. Whether other authors of antiquity describe it the future will show. I believe that I can bring the *παρалуσις* which occurs as the outcome of a melancholy into association with a paralysis of the activity of the soul, which he describes in the following words: The mind sinks into apathy and dementia, it loses the consciousness of its own personality and the individuals live their lives like animals. *πολλοισιν (μελαγχολικοι) ες αναιοζη οιην και μωρωσιν ηλυωμη ρεπει, οκως αγυωτες απαντων επιλησμονες εαντων. Βιυν ζωωσι ζωωδεο.*

Hippocrates had already given a brief description of feeble minded individuals, yet they were not exactly demented. Aristotle described a congenital dementia more distinctly and added that similar fearful states resembling these to be found in congenital imbeciles could also be observed in epileptics and maniacs. But Aretaeus was the first to describe a dementia as a residual of a chronic psychical process.

A third possibility of the outcome of a melancholy is given by Aretaeus. This is *μανη*. As our present day melancholy dates from the time of Aretaeus we shall also see that he first used the word *Mania* in the sense of our mania. Many similarities are found in the two forms. First of all these are individuals, who do not suffer from the above mentioned hypochondriacal troubles of melancholia, but only show anger, ill-humor or great depression; they are also called melancholic, because *χολη* like anger, *μελας*, is considered equally violent. (1. Evidence for il. Homer *Ilias*. I. 183). Further we find in Aretaeus the interesting statement that melancholy is to be looked upon as a part of and a beginning of mania. *λοχει δεμοι μανησεμενι αρχη και μερας η μελαγχολια*. Naturally this is not true of even melancholy. But Aretaeus has discovered with sharp eyes and wrote it down in precise words that maniac states have melancholic prodromes, and furthermore the most distinct mania may show an indulging melancholic disposition. They are not different diseases. (1. I cannot explain these words differently. (*μερας της μανιης μελαγχολια*) as in the following paragraph two classes appear: *οιοι μεν ες σκνζρωπον η μανη τρεπεται οιδι δε εσφμηδι ην*. Morel must have overlooked these words, if having in mind the above mentioned place, he gives it as an opinion of Aretaeus that melancholy is the beginning and a modification of mania (op. cit. page 12). Then Aretaeus describes the transition from melancholy to exaltation. In some patients appears, gradually or suddenly an enlightening. They have an indescribable pleasant feeling and mania begins—*ηδονη προσγιγνεται επι τοις πλειερασσι α δε μαινονται*.

As long as the black bile remained in the hypochondrium it was melancholy, but if the head is affected too *ην δε (χολη) κεφαλην εν σνμπαζειαν αγη*; then sadness changes into a long lasting condition of laughter and of jubilation; then the patient becomes furious. They are no longer considered as melancholics but as furies, and yet their illness has only

gained in dimensions, but not changed its nature.³⁵

It is noteworthy that he here observes that an affection of the head, that is, the brain, can cause a peculiar form of mental collapse or at least the exaggeration of one already existing. Only a little or not at all cleared becomes the reference on comparing it with the chapter devoted to the treatment of phrenitis. (2. Edit. Kuhn. pg. 189). The head is the place of sensation, the source of the nerves and withdraws from the heart more blood than all of the other organs.

Whereas melancholy consists of sadness and depression³⁶ the maniac is at one time inclined to anger, again to immoderate cheerfulness. Whereas as narrow-minded, indolent and clumsy characters are inclined to melancholy, the high strung, cheerful, susceptible and clear headed are apt to develop mania. Whereas melancholy is a disease of ripe years, mania mostly attacks the youth. What mucus is to epilepsy and black bile to melancholy, so yellow bile is the evil principle in mania. There are several kinds of symptoms in mania, but the fundamental character is always the same: general chronic mental disturbances with excitement but without fever. If there is temperature it has nothing to do with mania. Deliria from toxic causes can be distinguished from mania by their acuteness. Senile insanity consists in stupidity and ceases with life. Mania is associated with violent restlessness, has intermissions, but can be cured completely; frequently however it comes to an incomplete recovery. Relapses are not seldom. An unrestrained way of living, especially sexually, is often looked upon as a cause of mania. The suppression of habitual evacuation in men is just as important etiologically, as suppression of the menses in women, which latter easily fall into ravings and rage in a horrible way.

³⁵Even the most liberal interpretation given by Falk of the words *melancholia* and *mania* do not make it appear that Aretaeus had circular phases in mind. For it nowhere is apparent that he speaks of sadness passing into laughter, but of *melancholia* into laughter and the special kind of *melancholia* is never specifically described. It may have been the depressed type or another, pure *hypochondriasis*. At all events we can say that Aretaeus describes faithfully some of the phenomena of present day maniacal attacks, but they must not be interpreted as a manic-depression psychosis. They may represent any acute psychosis beginning with feeling of unrest and finally developing acute maniacal states, exhaustion and toxic psychosis in particular. (Jelliffe) (Kuhn) (Edit. Aret. pg. 79) tells us: *mainontai auze tes noudon mallouealgei pazeos*, but the writing of Ermerins *allage tazios* is clearer and corresponds to the connections.

³⁶ Kuhn says in the text: *es lupen zumedie monnon e guome e trepetai*, but in the commentary (pg. 449) refersto the Junius reading, *zumiegan au*, instead of *zumedien*. Ermerins joins him and thereby reforms his text more clearly.

One class of patient is harmless. These rave with continuous laughter, jumping, dancing, decorating themselves with crowns of victory. Others are very dangerous, tear up their dresses, kill their servants and attempt to destroy themselves. Aretaeus very ingeniously shows how the various degrees of education of the patient shows in the expansive mood in insanity. The educated men want to learn astronomy without a teacher; will be a philosopher by means of his own genius, *αυτισματη φιλοσοφει*, a poet by divine favor, *παησις απο μονοσεων*, whereas the uneducated intend to do grand skillful hard work. Many patients indulge their sensual appetites publicly and get into a fearful rage if corrected for it. In mania the most comical delusional ideas appear, especially the belief in personal metamorphosis.³⁷

Furthermore if in mania the head is also attacked it is however not so much implicated as in phrenitis. As a rule, in melancholia and in mania the sensory apparatus is normal, only the judgment concerning the sensory impressions is perverted; whereas in phrenitis the senses are in a stupor and the patient imagines he sees what is not there. This is to be thought of as a separation of illusions³⁸ from hallucination, yet the distinction made by Aretaeus as to their occurrence in acute and in chronic processes is very surprising.

Finally the author dedicates a few words to a special form of "Mania." This is a condition in which the patient torments himself, believing in a religious delusion that the gods demand it of him. He therefore performs a complacent work. In the text it reads: *Της υποληψιος μανια μονγοι τα δε αλλασωφρονενσιν*, from which it is perhaps to be understood: This mania arises from an isolated conviction, the patient being otherwise rational.³⁹

Such attacks can be aroused by emotions, by impulses from the surroundings, as also by the music of the flute. When the attack has passed, he feels free and relieved, in the belief that he is now consecrated to the gods. The results of their

³⁷In general I do not consider it so important to reproduce such cases as Damerow has done in his thorough and expert critique of *Friedrichs Literar Geschichte*, *Jahrbucher fur wissenschaftliche Kritik*, 1831. The reason given by Damerow that only a few special attacks occur in the ancient writings is in general quite important.

³⁸Here Falk really means delusion in our present day sense (Jelliffe).

³⁹Kuhn also translates, in *persuas ine quadam consistit*, page 84.

own maltreatment are for a long time evidence of the attack. This insanity says the author is a "divine destiny," ἐν θεοῦ ἐδῆ ν μαυρη.

How this religious insanity is to be interpreted from the brief exposition of the same is more difficult to decide, than are certain of the peculiar religious psychopathic conditions which have been related by the physicians and chronologists of the middle ages. Whether in this picture sketched by Aretaeus we can perceive the expression of a melancholic state of mind, which accuses itself of godless actions and strives to reconcile the divinity by self-imposed punishments (perhaps influenced by divine voices) or if we are to regard it as an incompletely developed maniacal attack with elevated religious mood without proper delirium⁴⁰ or whether, which is also not impossible, it is to be regarded as the explosion of a fixed idea, which because of external quiet and apparent presence of mind during the intervals of an attack, illuminates, in passing the background of deep mental disturbances, or whether, finally, in some cases the effect of an intentional or unintentional deception is operative; all this I do not dare to decide.

As it is not expressively stated that the "Flagellants" especially belong only to the female sex, so it is not allowable to ally these perversions with the large group hysteria provided that this signification of such condition becomes clearer to us. At all events it is a fact that paganism also had his religious delusions. Whether the religious eccentricity of a normal individual may develop into an insanity, or whether such action only represent accidentally occurring symptoms, cannot be decided.

The chapter on the treatment of mania is unfortunately lost, therefore we turn our attention now to the acute mental disturbances. Aretaeus mentions such first as accompaniments of febrile diseases; thus consciousness becomes clouded in pneumonia, without necessarily causing violent restlessness. In acute diseases of the liver complete confusion may not develop but a state of mind of depression, anxious vacillation, lack of interest shows itself. Suppression of urine, as in kidney and bladder disease, can also bring about convulsions and mental

40Cf. Griesinger, pg. 303.

confusion. (1. Edit. Kuhn. pg. 50. Uremia.) Peculiar is the effect of the sensorium with the *χανσοι* (περι σημειων οξεων καρ.)

With increase of fever consciousness is clouded even to complete stupor. But if a most deadly *δυγκοπη* appears, the patient comes to himself, and, indeed, the intellect becomes so clear, that he receives a certain ability of prophecy, and especially is able to foretell his death. At first one believes he is insane; the fulfillment of the prophecy causes surprise.

Aretaeus does not array satyriasis with mental disease. Such sufferers are at first timid and afraid, because of shame, later they have so little control of themselves, quiet reflection is so chained, that they show in public the greatest indecency in words and in action. According to its nature the disease is an acute inflammable genital affliction. Through irritation of the genital nerves a variety of nervous and psychical symptoms is caused, such as convulsions and such an immoderate sexual desire that even immoderate sexual indulgence cannot satisfy it. The disease often kills within a period of seven days. The therapy is here especially local and antiphlogistic. The author opposes the opinion that women also suffer from it. Of course there are very sensual women, but they do not therefore have satyriasis; their nature is not fitted for it. Furthermore it is not etymologically correct to speak of satyriasis in women. Men in the same sense cannot be attacked by hysterical suffocation, as they have no uterus.⁴¹

We again meet with phrenitis as an acute febrile disease and which is looked upon by the author as a brain malady. If by cutting the hair and rubbing the scalp phrenitis could be cured, we ought not therefore believe that phrenitis was a disease of the scalp. *Τεπι σημειων οξεων παθων, καργ.* The primary source can also be in the hypochondrium.

The chapter on Diagnosis and Etiology exists no more. From the therapeutic paragraphs we see that mental confusion was considered the principal symptom of the disease. Stupor was usually present but variable forms also occurred. The therapeutic methods which were developed with great care-

⁴¹Notwithstanding it is interesting to compare with those descriptions the symptomatology and the course of cases of nymphomanie with inflammation of the genital organs, which have recently been described as acute fatal hysteria. L. Meyer in Virchow's Archiv. IX. 1856.

fulness contain nothing specially new. They support all of the principles of Celsus, whose name however is not mentioned. His psychic remedies are also recommended, rest of body and of mind being emphasized particularly. Even colored walls give occasion for excitement.

In his etiological and general pathological views Aretaeus, as a psychiatrist, is a follower of the Hippocratic views. He follows the humoral doctrines and only sets forth somatic causes. Singularly, he apparently abandons the doctrine of Hippocrates concerning the physiological and pathological significance of the brain. In not very definite words he assumes a cerebral affection only for mania and principally for phrenitis. He is not willing to leave Divine dispensation entirely out of consideration. The Hippocratic theory of heat and cold, moisture and dryness he attempts to combine with the instructions of the pneumatics, in that he permits these agents to work upon "pneuma," the life principle. He likewise accepts the importance of the seasons, as also the suppression of the secretions as being causes of mental disease.

Psychic remedies are not applied by him in melancholic cases. What he thinks about the use and the admissibility of measures of restraint we cannot judge as we only have fragments before us.⁴²

On the other hand his diagnostics are keen. The contrast and the connection between disturbances of the mind and serious-nervous affliction, as also between the single forms of mental disease are more thoroughly drawn than by any of his predecessors. As for prognosis he shows a certainty gained by experience. His talent for observations, his understanding of the psychological foundations of the words and actions of the mentally diseased ought to be admired. Aretaeus has been criticized for sacrificing nature's truths and principles for a lively and attractive style. So far as the psychiatric portions are concerned we cannot join in this criticism. Although we do not approve of some of his hypotheses we can nevertheless regret that an unfavorable fate has deprived us of an abundant treasure of knowledge and of experience.

⁴²I do not know upon what Haeser relies, when he says that Aretaeus is against all coercive measures and effective proceedings, because energetic deprivation of blood and acute catharsis have not been neglected by him.

SELECTIONS.

NEUROPATHOLOGY.

SPINAL CORD TUMORS.—Flateau, who has had comparatively abundant opportunity for observing these cases, finds the operative morality about 50 per cent., due to faulty technique, septicemia, and a group of causes little understood and probably due to operative traumatism. Much effort has been made to develop the differential diagnosis between intra and extramedullary growths. Nonne concludes that a strong phase-one reaction and an absent lymphocytosis cannot be used to differentiate between these growths. The X-ray is of little value in the diagnosis of tumor of the cord. If, however, the spinal column is also involved by the growth, much help may be obtained. The territory embraced in the cauda equina, says Schwab, is still a region full of diagnostic pitfalls. Not only is localization here extremely difficult, but operation is accompanied by high mortality. Further study of these cases, especially the microscopic study of such cases as come to autopsy may add to our knowledge.—(S. I. Schwab, *Interstate Medical Journal*.)

INFLUENCE AND AFFECTS ON THE DISTRIBUTION OF BLOOD.—Citron discusses both physiological and pathological shifting of the blood from one region to another. The former is seen in blushing and pallor, the latter in various active congestions and ischemias and generally speaking in all vasomotor pathology. Various drugs, notably alcohol, cause notable changes in the distribution of blood, and the same is encountered throughout the entire domain of hydrotherapy. The subject of anomalies of blood distribution is therefore psychophysiological, and the lability of the vasomotor system in neurasthenia, Graves' disease, etc., causes it to be readily influenced by both

psychic and physical factors. The author has experimented extensively with the plethysmograph upon the distribution of the blood as influenced by affects, both psychical and physical, and believes that plethysmography will have a place in practical diagnosis.—*Deutsche Medizinische Wochenschrift*.

ANCIENT ARTERIAL DISEASE.—The results of studies of the arteries of Egyptian mummies now published by Dr. Marc Armond Ruffer bear strongly against some widely prevalent notions about diseases supposedly of recent origin and caused by tobacco, alcohol, athletics, and the wear and tear of modern life. Using ingenious methods, which the well known medical and surgical journal, the *Lancet*, declares to have been "satisfactorily scientific" for getting into shape and dissecting the mummies and other material found in the burial grounds of Egypt, Dr. Ruffer has found evidence of extensive existence of these diseases among ancient Egyptians and prehistoric men.

He declares arteriosclerosis and arterial degenerations to have been common conditions, which, says the *Lancet*, are "the pathological 'horrible example' held up by anti-tobacco-nists, total abstainers, diet faddists of all kinds."

The marks of disease observed by Dr. Ruffer are widespread; he concludes that "the old Egyptians suffered as much as we do now from arterial lesions identical with those found in the present time," for few of the arteries were quite healthy.

There is no trace of tobacco having been used by the ancient Egyptians. They certainly were not then any more than now meat eaters, so that the cause of which vegetarians attribute the diseases in question must be eliminated. Alcohol Dr. Ruffer also sets aside, for though the Egyptians used alcoholic drinks they never were drunkards any more than they are nowadays. Moreover, he made 800 post mortems on Musselmans, who never touched alcohol in their lives, and found arterial lesions just as frequent among them. Finally he does not believe that excessive muscular exercise was the cause of the ancient prevalence of those diseases, for evidence is lacking that the Egyptians were addicted to athletic sports, and the priests and priestesses of Deir el Bahara, whose mummies he examined, certainly did not indulge in them.

Dr. Ruffer's conclusion is that our life is easier and that we work less and are better nourished than our ancestors. And the general idea to which his studies point is that the diseases that afflict mankind are all or nearly all about as old as the race. The so-called "diseases of civilization" are simply those which our forefathers did not know enough to diagnose. In some cases, of course, special causes and differences in ways of living have had special results in the disease line, but the general progress has been towards better health.—*Worcester Post in Maine Med. Jl.*

NEUROTOXICOLOGY.

THE TOXIN OF THE MOSQUITO.—Bruck writes of the essential chemical poison of the culex which is able to cause the formation of wheals and papules. Our knowledge of insect poisons is still crude. We know about cantharadin, bee poison, and the venom of arachnids, which latter can generate antibodies. Little is known evidently of the poison of ants, fleas, bedbugs, etc., and our knowledge of the toxic principle of wasps and hornets is largely inferential, from its probable resemblance to that of the bee. The poison of the mosquito is termed by the author culicin. It is believed to reside in the insect's saliva, and is obtained by extraction from the bodies of large numbers of the creatures, using water, glycerine, chloroform, etc. Animal experiment shows that the extracts possess hemolytic powers. The author inoculated his own skin with culicin and produced lesions which behaved exactly as do those following natural mosquito bites.

CLINICAL NEUROLOGY.

CLINICAL INTERPRETATION OF URINARY ANALYSIS.—The Medical Record wisely gives selection space for the following which is of much clinical value. The clinical significance

of transient urinary findings is not always correctly interpreted, especially in the neurosopathies. Marcel Labbe agrees with M. Leven that there is much danger in having patients compare the urinary findings furnished for them by analytical chemists with the "normal" findings usually printed on the same sheet. Such persons frequently imagine themselves ill of various diseases because of discrepancy between their urine and the normal values; occasionally they treat themselves for various symptoms which they refer to the kidneys. Labbe thinks that such "normal" findings are misleading even for the physician, for they tempt him to forget that to interpret urinary findings one must take into consideration the food of the patient, his physical condition, his age, etc. etc. Many physicians, for instance, prescribe various phosphates or phosphoric acid preparations, because a single examination of the urine shows a deficiency in these elements. Frequently an excess of nitrogen and occasional glycosuria is interpreted as meaning a disease of the pancreas. Uric acid determinations, if they give high values, are interpreted as signs of gout or other forms of arthritis. It is therefore, best to take none of the urinary findings as standard for comparison, but to compare the results of analysis with the theoretical values which may be considered normal only for the individual under examination.—*Journal de Medecine de Paris*, December 2, 1911.

NEUROTIC DYSPEPSIA.—G. Rankin, Brit. Med. Journal Med. Rec. Ex., notes that the function of any organ can be disturbed only in one of three ways—by excess, by default, or by perversion. According to this proposition he accepts Robin's classification of dyspepsia under three primary headings, according as it is caused by hyperfunction, hypofunction, or abnormal fermentations. Neurotic dyspepsia is frequently mistaken for duodenal ulcer.

CLINICAL PSYCHIATRY.

THE MODERN TREND OF PSYCHIATRY.—J. V. May, Fishkill-on-Hudson, New York (*Interstate Medical Journal*, November), reviews the progress that has been made in

recent years in our study of psychic diseases. The work is only beginning to yield results, thanks to such men as Kraepelin, Nissl, Alzheimer, and many others. Special attention is given to the "psychic trauma" of Freud, with the sex problem, dream interpretation and psycho-analysis. May believes that the outlook for psychiatry is exceedingly hopeful.

—*Interstate Medical Journal.*

PSYCHIATRY.

ACCOUNT OF AMNESIC DOUBLE PERSONALITY comes from Seattle, Washington Territory, October 21st. as follows:

Young Jane Patterson went to the Pacific coast with a musical comedy company a little more than two years ago. Meeting Mr. Scott, a wealthy lumberman, in Vancouver, British Columbia, they fell in love and were married in that city in 1909. According to her complaint she nursed her husband back to life after a long illness, following a fractured skull, only to have him suddenly remember he had a wife and children back in Edinburgh, Scotland. He had been married in that city twenty six years ago, Mrs. Scott averred.

He declares his name is Scott, the complaint says, but cannot explain how he came to forget his first wife. He does not recall any injury or illness that would have tended to impair his memory. She sues for a divorce which he will permit to be obtained by default. Mr. Scott will return to Scotland and institute search for his wife and children. The agreement with the second wife is that if he finds them he will settle in his native land; if he is unsuccessful, he will return and again marry his second wife.

FEWER INSANE IN INSTITUTIONS IN WEST AND SOUTH.—In general the number of insane in hospitals in proportion to population is much smaller in the West than in the East. The ratios are also smaller in the South than in the North.

In 34 out of the 49 states and territories, including the District of Columbia, the ratio of insane in institutions to total population was larger in 1910 than in 1904. Most of the

states in which the ratio was smaller lie west of the Mississippi, the number including all the Pacific coast states and all but three of the mountain states. This section of the country has undergone a very rapid development in recent years, and it is possible that the new population coming from other sections of the United States represents a class in which insanity is less prevalent than among the stay-at-homes. But the decrease in the ratio may also indicate that the provisions for the care of the insane in institutions have not kept pace with the rapidly increasing population.

The Census Bureau is now engaged in tabulating the data for the insane included in this enumeration with respect to sex, race, age, country of birth, etc. The results, when completed will be published in a special report, which ought to bring out many features of interest regarding this class of the population.

The comparative summary of the insane in institutions, by states, for the years 1910 and 1904, is also given.—*Prelim. Rept. Com. and Labor.*

DIPLOMA IN PSYCHOLOGICAL MEDICINE.—The following regulations were adopted by the Royal College of Physicians of Great Britain, Ireland, on July 27th, 1911:

1. Any member of the College may ask permission to present himself for further examination in psychological medicine.

2. The further examination in psychological medicine shall be held on such dates as the Censor's Board may from time to time determine.

3. Candidates shall be examined in:

- (1) Psychology and the study of conduct in relation to mental disorder.

- (2) Psychological medicine and the jurisprudence of insanity.

4. Candidates shall be examined by written questions on each of the subjects mentioned above: the practical knowledge of the candidates shall be tested in all institutions for the insane, and the candidates shall be examined *viva voce* in all the subjects of the examination.

5. On the letters testimonial of every member who satis-

fies the examiners in psychological medicine, a statement to that effect shall be engrossed and signed by the examiners, accompanied by a certificate by the Registrar.

Form to be engrossed on the letters testimonial.

A.B. die mensis A.D.

in Medicina Psychologica examinatus satisfecit nobis
Examinatoribus.

Ita testamur { A.B. }
 { C.D. } Examinatores.

6. Every member who satisfies the examiners will be permitted to add to any mention or description of his membership words purporting that he obtained distinction in psychological medicine.

THE INSANE AND THE LAW.—How organized treatment of the insane began.—The most mysterious and fascinating subject of research through all ages has been the human mind itself, and until recent times its pathological manifestations have been generally considered to be due to supernatural agency. That mental alienation existed and was recognised in very early times is proved by the fact that the symptoms of senile dementia are described in an Egyptian papyrus which dates about 4500 B.C. It seems to have occurred in all ages and in every country, and though the superstitious and ignorant have generally regarded the insane as being possessed by some super-natural power, good or evil, yet it appears probable that the thinking few have always recognised it as unwholesome. This superstition of demoniacal possession is still to be found, even amongst educated people, though epilepsy—the sacred malady of the ancients—has for generations been regarded as a pathological stigma; and the writer has had under his care a lady suffering from acute mania from whom a clergyman, apparently sane, had attempted with Bible and crucifix to exorcise the evil spirit which, according to him, had entered into her and was the cause of her mania. Such cases as this are, of course, rare, yet it is curious that there should be so much ignorance of the elements of mental pathology amongst the laity in an age when to label any book “a psychological study” seems to ensure its being read.

Classification of the Insane.

One can judge what probably happened to the insane in early times from what becomes of them amongst savage and uncivilized tribes. For this purpose insanities may be roughly classified into three divisions: (1) Congenital mental deficiency—idiots and imbeciles; (2) Insanities occurring in adults—in which a marked change takes place in the hitherto normal mental state of the individual; (3) Senile dementia—the result of wear and tear of the nervous system showing itself in advancing years. Amongst uncivilized peoples the lowest grade of idiots and imbeciles, if not killed in early infancy, die of neglect; higher grades, who are able to provide for themselves, survive until their cunning and bad temper are abruptly determined by a sane member of the community and a club. Cases of senile dementia, or second childhood, as the condition seems to have been called in Ancient Egypt, which are now carefully looked after, are reported to be killed in many tribes as soon as they become a burden. Most interest lies in the cases of insanity occurring in adults, and these would appear to die as a result of their disease, to be killed as a result of their delusions, or to be held sacred as possessed of supernatural powers and carefully tended. With advancing civilization the slaying in cold blood ceased, but for the active amelioration of the condition little or nothing was attempted. Legislation as regarding the insane commenced in different countries when civilization reached such a state that waste of property was recognized as an evil; and in the resulting laws the property and not the patient was the first consideration. Amongst the Romans there was apparently no segregation of the insane, but the law restricting freedom of action was more rigorous than our own. According to the law of the Twelve Tables, mad men and prodigals were placed under the care of specially appointed guardians, who managed their affairs. (The classing of the prodigal with the insane is interesting and shows wisdom). In England, the Statute de Prerogativa Regis in 1324 made the king the guardian of idiots and madmen, to administer their estates, a duty which had hitherto been in the hands of the overlord. Upon the Lord Chancellor, as keeper of the King's conscience and presiding officer of the

Court of Chancery, the duties naturally devolved, and he has continued to fulfill them ever since, being at the present day the President of the Lunacy Commission.

Early Institutions for Insane.

It was not until the end of the eighteenth century that any law was passed dealing with the care of the patient. At that time there were at least three philanthropic institutions for dealing with the poor, and many private ones for dealing with the well-to-do patients. The philanthropic institutions alluded to were three of the registered hospitals of the present day: Bethlem Hospital, founded in 1247; the Bethel Hospital at Norwich, founded in 1711; and St. Lukes' Hospital, founded in 1750. These dealt with acute cases who could not afford to pay the fees of the private houses, but did not take in parish poor; and such treatment as was then in vogue was carried out in them. The first Lunacy Act dealing with the welfare of the patient, passed, as stated above, at the end of the eighteenth century, was largely due to the public attention having been directed to the condition of the existing asylums by the insanity of King George III. Non-restraint treatment also began about this time with the opening of the York Retreat by Tuke, whilst the same work was being carried on in France by Pinel. Soon after this the first Poor Law asylums were opened, and improvements in the law were made. There was but little progress in scientific treatment, however, until the middle of last century, though interest in the subject continued to grow and its importance became more fully realized. The present Lunacy Act and its amendment, dating from 1890-91, is now badly in need of revision, which, though long since promised, does not seem likely to be accomplished for some time. Our asylums, the treatment carried out in them, and the utilization of the vast field for scientific research that they afford, though immensely improved do not yet approach the ideal: nor does it seem likely that they will do so until the care of the insane is undertaken as a whole by the state instead of by numerous local authorities.—*The Hospital.*

NEUROTHERAPY.

PHOSPHORUS AND LECITHIN IN THE TREATMENT OF MIGRAINE.—The introduction of lecithin into therapy appears to have given a certain impetus to a revived exhibition of phosphorus as a so-called tissue remedy. At a recent meeting of the Gesellschaft für Natur und Heilkunde zu Dresden (*Munchener medizinische Wochenschrift*, May 23), Schottin expressed the belief, founded on ten years' study, that migraine is due to poverty of the cortical centers in phosphorus. The supervention of attacks while the mind is active, the disappearance of attacks during sleep, the stimulation with consecutive paresis of the optic and acoustic nerves (this constituting an aura), with similar involvement of the arm center, all point to a cortical location. The headache is attributed by Schottin to increased sensitiveness of the cortical sensory centers, which is propagated from the cortex to the vomiting center. The author treats migraine, *i. e.* the tendency to the paroxysms, with a nontoxic combination of phosphorus and lecithin in oil. The favorable results claimed seem to be the principal reason for the belief in the phosphorus-starvation theory of the origin of this neurosis. The author expresses a belief that spasmodophilia in children has an analogous origin and upon similar grounds, viz. improvement under the use of phosphorus.—*Med. Rec. Ed.* 7-8-11.

COPPER AS A REMEDY.—Kiernan has called attention to the fact that, among alchemic physicians, copper enjoyed a great reputation for what were later called "nervine-alterative" qualities, and it was used in epilepsy, chorea, and insanity, as Burton's "Anatomy of Melancholy" gives evidence. Its supposititious virtues led Paracelsus to make it the basis of one of his metallic tinctures. From him Rademacher took the therapeutic indications, and his tincture of the acetate of copper is employed by the eclectics today. That the Paracelsian use of copper was never completely abandoned by regular physicians is apparent from the perusal of the two first American Dispensatories, that of John Redman Coxe (1810) and the one of James Thacher (1812). In both of these works copper

is recommended as an alterative tonic in epilepsy, chorea, and other spasmodic conditions, especially those connected with debility. Later therapeutists sustain this old belief.

The therapeutic indications for copper, as assumed by Rademacher, are a grayish complexion, sunken features, small soft, wiry pulse, light colored, very acid urine, and early nerve symptoms, hallucinations, convulsions, delirium, etc. All of these symptoms are indications of what the older clinicians called nervous adynamia, a precursory suboxidation toxemic stage of neurasthenia.—*Dr. George F. Butler, The American Journal of Clinical Medicine.*

DWARFS IN EGYPT.—G. W. G. Hughes states that of the recruits to the Egyptian army who are sent to Cairo for medical examination 7.5 per cent. have bilharzia ova in their urine. One of the most striking results of ankylostomiasis in the young there is the stunting of growth.

NEUROPATHY.

ALCOHOL A DEPRESSANT.—Under this caption the New York Medical Record has a most timely editorial of special interest to the alienist, neurologist and all practicing physicians. The stimulant conceptions of alcoholics evolved from a perception of their initial excitant effects on the heart and pulse and their vasomotor paralysing influence, dilating the blood vessels, exciting increased functional activity in the brain and other organs though soon followed by compensating exhaustion have mislead therapeutic thought.

Save in exceptional instances where immediate cardiac reaction is imperative alcohol is a therapeutic mocker, stimulating to exhaustion, perversion and death of the normal functions of organic life. It has been a delusion and a snare to too many physicians through a too long reliance on its counterfeit powers as a curative agent whereby the unwise have been deceived. Great is the evil that has come to the human race through the misuse of the term stimulant for depressant. If it is the duty of the medical man to teach the public that the familiar

house-fly is a "typhoid fly," surely it is his duty to instruct the public that alcohol is a depressant, "crushing," and "subduing" rather than a stimulant "goading on" to increased activity—asthenic and almost never sthenic. The immeasurable misery caused by alcohol in this world of ours, as it is generally recognized, lies largely in two of the circumstances related to alcohol: one of these is that the drug is a sedative and financially, as well as otherwise, a very expensive one; the other one is that habituation to its use is both easy and enslaving. Let us see then how it is a depressant in each essential phase of its physiological working.

In metabolism it acts always, even in small amounts, to lower the body temperature, and in quantity it cools the tissue-protoplasm beyond recovery. The sense of body heat, of course, arises almost wholly in the skin and alcohol raises the surface temperature by a marked vasodilatation. This effect far outbalances whatever increase of heat-production comes from its endogenous combustion. Herein is the most essential of all possible modes of depression. Despite the fact that in amounts of not over 50 or 60 c.c. daily alcohol is oxidized largely in the musculature, the action of the muscles is disorganized and rendered less powerful as well as far less efficient. The apparent stimulation of the heart in rate and vigor, recent physiology construes as in reality a depression of the vagal influence over the ventricles—two negatives thus making a positive. But even so, the rest-periods of the organ are shortened materially, its total strength being therefore literally depressed in a period which is long enough to involve fatigue.

Respiration is markedly affected by large doses of alcohol, the medullary centers being apparently directly depressed by the poison in the blood. Digestion is checked by alcohol in large amount, the action being local on the mucosa as well as reflex and sympathetic. The nervous system is typically depressed by alcohol, as one may often see in the immunity of intoxicated persons to falls and blows upon the head and other seats of nerve-masses. Mental action, too, is depressed in nearly every case with the exception of the imagination and certain phases of emotional activity of less efficiency and value than the intellectual faculties. The depression exerted on the

all-important chromaffin and thyroidean system by alcohol may be presumed from their close dependence on normal metabolic conditions, but the action of alcohol in this respect remains to be worked out. The "stimulating" effects of alcohol, then, are rather apparent than real, for in nearly every case the phenomena may be shown to be really depressions of the inhibitory phase of the balance-control which is so common in the organic functions.

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Any Comment, favorable or unfavorable, specifically set forth, is always welcome from friend or enemy or any "mouth of wisest censure."

CHAS. H. HUGHES, M. D., Editor and Publisher.

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EDITORIAL.

[All Unsigned Editorials are written by the Editor.]

"COLONEL WILLIAM C. GORGAS will have made possible 'more than any other one man' the construction of the Panama Canal. The Canal would have been a French achievement, had it not been for yellow fever and malaria. Whatever of dishonesty in affairs may have existed in the French company was of small import beside these two tropical diseases. Shoulder straps have never prevented the bite of a malaria carrier, nor of a yellow fever carrier."

And this is no disparagement to the great engineering skill of Colonel Goethal. Gorgas has made the greatest feat of the age a possibility at Panama.

A MAGAZINE OF EUGENICS.—To one who has noted the tenor of many of the articles which have appeared of late in the *Alienist and Neurologist* it is remarkable how much more consideration than formerly has been of late and is being given to the important subject of psychocerebral and neural eugenics. The valuable articles of Drs. Barr and Taylor in this issue are especially confirmatory of this paragraph.

QUIET ZONES IN CITIES.—Quiet zones for schools, court rooms and churches are beginning to engage public attention. *The Forum* and the *Boston Medical and Surgical* and other periodicals and the Society for the Suppression of Unnecessary Noises are moving in this matter so essential to health and comfort. Not a great while ago the block around the St. Louis Court House was repaired with wooden creosoted blocks in lieu of the granite environing pavement whose noisy moving vehicles disturbed the deliberations of Justice within.

When the needless noisy newsboy and the unnecessarily noisy chauffeur shall have been suppressed and rough stone blocked streets shall have been supplanted with paving more Christian and less sonorous, one more source of ungolden rule misery will have gone from the pathway of health and happiness seeking civilization.

Heaven speed the consummation and may the dangerous destroying and disturbing dust go with it.

EUTHANASIA IN THE SENSE OF TAKING THE LIFE of a suffering patient by deadly poisonous anodyne narcotics is not to be considered. Suffering may be medicinally assuaged within therapeutic limits to the end of life, if rightly treated as by opiates, etc., but never to the extent of deadly toxicity. Baron Larry's answer to Napoleon, "My mission, Sire, is to save, not to destroy life" is the attitude of the physician and surgeon and the *Alienist and Neurologist* on this subject.

THE PRESENT LORD MAYOR OF LONDON is a physician eighty-one years old. He is the first physician among the men thus honored. He is a Knight, fellow R. C. S., and Ex-

President Hunterian Soc. St. Thomas Hospital once knew him as House Surgeon.

THE PSYCHIC PERIL OF THE MOB against organized government and to social safety and welfare is becoming all too manifest these days for the good of good government. The rearing of the stably brained should engage the attention of pedagogy in the schools and the selection of upright, fearless, stable brained jurists should engage earnest public attention at the polls. The members of the labor Unions, too, might take more interest in selecting likewise level-head leaders. There is a degree of tyranny in one man in the republic having the power to call off from work all and paralysing the peoples' transportation and business and comfort.

Neurone stability and its attendant brain integrity is the aim of the alienist and neurologist for individuals and communities. The Apaches and Hooligans are usually more or less psychopathic and as such are a menace to that stability of brain that appreciates and enforces tranquility, justice and right social order in communities.

CHEAP BARONETCY: THE LATEST-MADE COLLEAGUE OF SIR WILLIAM OSLER. Baronetcys, says the Med. Rec., are cheap in Great Britain. Among the British baronets is Sir James Beecham who made fame and a fortune by the sale of the pills that bear his name. It is not stated whether he was made a near peer because of the therapeutic efficacy of his pills or because he had contributed a tidy fraction of his profits from their sale to the treasury of the Liberal party.

THE HANDSOME INTELLECTUAL FACE of Dr. Alfred Kimball Hills appeared in the December last number of *The Medical Times* but his name as editor will no longer appear. He has retired full of honors to make way for Mr. Romaine Pierson.

ALL MEDICAL SCHOOLS SHOULD BE EQUAL BEFORE STATE MEDICAL BOARDS AS THEY ARE BEFORE THE LAW.—They should stand alike on their teaching faculty merits. No

State Board should be allowed by law to pursue and disqualify by non-recognition, the medical profession's chartered medical colleges on frivolous objection of politically appointed non-teaching inexpert State Board's made up peccadillo faults of equipment such as not being clean enough in vacation or not possessing the right set of tools according to the idea of these politically selected members. Health Boards were not created for the purpose of oppressing or destroying regular chartered colleges of medicine.

If by insidious scheming any State Boards have had this tyrannical power bestowed on them by unconstitutional law it should be taken away from them at once.

A State Board's ideals on not keeping records to suit or not having an impossible quota of parturient cases, etc., etc., or not having more than a High School preliminary education etc., etc., are no adequate grounds for discrediting a medical college and then practically putting it out of business.

These matters properly belong to the legally qualified chartered managers of medical colleges. State Health Boards might be endowed with suggestive but not mandatory medical college-destroying powers.

The method and manner of displacing the faculties and directors and obliterating good State chartered medical schools on the order only of certain State Boards of Health is an unendurable tyranny and wrong against vested rights that the people will not tolerate. Better no State Health Boards than such tyranny.

AN EXAMPLE FOR CARNEGIE and the other multimillionaires who wish to die poor, may be seen in the manner of giving of that greatest of all American philanthropists, Dr. D. K. Pearson, and he a retired physician to the honor and glory of American medical charity. Dr. Pearson has given his all, about 7,000,000 dollars, notes the *Medical Fortnightly*, mainly to small colleges, and now that it is all gone, he has presented even his elegant home to the little suburban town in which he lives, Hinsdale, Ills., to be used as a library and museum while he is spending the last few years of his life (he is now ninety-one) in a local sanitarium.

But Carnegie and others have given to the big universities and their medical annexes. It is good even to help the strong but better to "lend strength to the weak, in hour of need" and make them strong.

The profession's own best non-university annexed schools, built of the bestowed means and freely devoted service of the medical profession, ought not to have been omitted from these multimillionaire benefactions. The smaller clinical schools of the medical profession have a place in the pride and glory of the medical profession and of every state.

They have a meritorious place made by the doctors for the making of physicians and they made good and great physicians before ever the elaborate laboratories were made in America, utilizing results of all collateral sciences as they do now. Let us not despise the day of small things nor extinguish the light thereof. Their light is even now illuminating the great university lights. The medical profession's mis-called commercial colleges now furnish chairs for the financially greater endowed schools.

THE USE OF MEDICAL LIBRARIES BY MEDICAL STUDENTS during the instruction courses is not greatly practicable. The student's time is all occupied in college work and attendance upon lectures. The chief time in the main for library books is during vacation interim.

Old authors in a medical college library are quite as essential often times as new, to enable the student to verify statements and compare; noting advances and historical discovery data.

The medical student, at least a junior or senior, is kept at work ordinarily from eight A. M. until five or six P. M. A little time for relaxation, recreation and meals is needed and then some sleep. Yet meager libraries constitute one of the indictments of the so-called poor commercial medical colleges without millionaire endowment and big University annexation the Missouri State Board brings against the schools that have not provided big libraries for students who are not perpetual motion machines and have not time except Sundays to use them. A little more consideration of the psychic sanitary rest and relaxation needs of medical students would be wise.

Though big libraries are never amiss in time of leisure to consult them, their absence ought not to be made a basis of non-recognition of medical schools nor should the absence of non-indispensable equipment, such as hoods in chemical laboratories or an impossible quota of midwifery cases to each student, or unclean rooms in vacation or negligent book-keeping. The faculty instruction is the thing.

HARVARD'S NEW MEDICAL PLANT.—When the building now under construction is completed there will be sixteen institutions forming the plant of the Harvard Medical School. These will represent a money value of \$20,000,000.00 (*Medical Record*).

The American medical profession takes a just pride in the prosperity and glory of this great and growing school. But suppose the Massachusetts State Board of Health should become inimical to it and by piccadillos and captious objection publicly announce its non-recognition as other health boards in other states have done towards other good medical colleges? Who would wish to further endow the plant or loan it money? Suppose, though its faculty continue as meritorious as it is, it should not have "a hood in the chemical laboratory" or should not be cleaned in vacation or did not keep its records of attendance or dispensary to suit the capricious conception of inexperienced politically appointed State Health Boards and force it to consolidate, because of these peurile objections, with some other college or go out of business? What would the chartered management and alumni think of such a "butting in" board of health or of the state that would permit such unlawful tyranny?

This manner of vitiating the value of medical college teaching plants is maliciously tyrannical and ought not to be countenanced in this land of ostensible Freedom where none is supposed to be deprived of life, liberty or property without due process of law. The profession of medicine cannot countenance this arbitrary and indefensible method of embarrassing, impoverishing and destroying regular chartered medical colleges and live in the esteem of a justice and liberty loving people.

DR. CHARLES E. DE M. SAJOUS AND THE NEW YORK MEDICAL JOURNAL.—Beginning with the issue of December 9th, 1911, Dr. Charles E. de M. Sajous, of Philadelphia, became the supervising editor of the *New York Medical Journal*. While Dr. Sajous will give up his private visiting practice, he will continue his work as consulting physician, investigator, teacher and author, and thus be in a position to keep in the closest touch with the needs of the medical profession.

The *New York Medical Journal*, its readers and the profession generally are to be congratulated on so valuable an acquisition to its editorial staff.

Dr. Sajous is too well known a writer, investigator and physician to require further detail description. He is America's and the world's peer.

CERTAIN PROPRIETARY MEN as post graduate instructors, (you will learn of them in the pages of the *Alienist and Neurologist*) help to refresh the young physician's mind, as to advanced and elegant methods of medical ministration. They help doctors in the practice of medicine—not all of them of course—but such as have space with us. Some proprietaries are ridiculously presumptive of professional ignorance and the latter's over proneness to be duped. But as a rule the generality of physicians are capable of discriminating choice and we have confidence enough in our readers to allow them the chance of selection, while we exclude the most flagrantly worthless, especially such as go also to the public in the newspapers.

THE COUNCIL ON PHARMACY A. M. A. compliments quite a number of the proprietaries by copying their formulae and giving them other names. It unwisely, we think, condemns some very good ones such as Gray's Glycerine Tonic, the formula of Dr. John Gray, late superintendent of the Utica New York State Hospital for the Insane, colchi sal, etc., the latter being what its name implies.

A MODEL MEDICAL RULE.—President Taft has thus amended his regulations governing the practice of medicine in the Panama Canal zone:

"Nothing in this order shall be construed to prohibit practice of the religious tenets of any church in the ministration of the sick or suffering by mental or spiritual means without the use of any drug or material remedy, whether gratuitously or for compensation, provided sanitary laws are complied with; or, gratuitous service in case of emergency or the administering of ordinary household remedies."

This is a model which should be inserted in the medical legislation of the states. Missouri needs the amendment. It is impossible to enforce laws forbidding people to seek mental and spiritual means of relief from their ills, or forbidding religious teachers and practitioners to minister to their supposed spiritual needs. It is idle to talk of putting men and women in jail for resorting to faith and prayer as means of relief from moral or physical troubles. But the distinction between medical practice and spiritual ministration in which no drugs or other material remedies are used should be taken out of the twilight zone of doubt and clearly defined in the laws.

The State should enforce approved sanitary regulations and necessary precautionary measures to prevent contagion.

—*Daily Newspaper Editorial.*

And we might add it should be the guardian of minors, insane, senile and imbecile who have a right to the best chances to live. The State should choose safe and sane medical service for them. If sane adults choose the way of folly let them alone like Ephriam and his people joined to their idols. "It is their funeral not ours."

A. P. M. IXth CONGRESS.—The ninth annual Congress of the Association Internationale de Perfectionnement Scientifique, (A. P. M.) under the high patronage of the French Government, will take place from the 3rd to the 31st of August, 1912 in the Balkans, in Turkey, and in Greece.

The Congress will be opened in Evian-les-Bains or Thonon-les-Bains (Lac de Geneve); and will be continued in the following order: Venise (via Simplon), Trieste, Grottes d'Adloberg, Agram, Belgrad, Descente du Danube, Passes de Kazan, Portes de Fer, Bucarest, Sofia, Constantinople, Mytilene, Smyrne, Athenes, Phalero, Eleusis, Corynthe, Olympic, Corfou,

Bologne (via Brindisi.) The last meeting will be held at Aix-les-Bains.

Colleagues wishing to present notices or reports (Medecine et Chirurgie generales et speciales et Sciences annexes, Hygiene dans toutes ses branches, Prophylaxie, Assistance), are earnestly requested to write to this effect to the Head Office.

The program of the Congress will be published in the January number of the review of this association. A copy of this special number will be posted registered on application on postal order value 1 s. 4 d.

For further particulars write enclosing international answer stamp 2½ d. to the President Head Office, A. P. M. 12 Rue Francois-Millet, Paris XVI, or apply on Wednesday and Saturday from 3 to 4 P. M.—*The General Secretary: Dr. Ghislain Houzel.*

A GREAT MAN GONE.—The Institutional Review thus speaks of a most worthy reformer well known to us. The death of Dr. Frederick H. Wines removes the most prominent figure in America in penology and public charities work. His labor extended over half a century, during which time he was a figure of both national and international note.

Great progress has been made in bringing to a higher standard, particularly in the treatment of inmates, the prisons, insane asylums, orphanages and various institutions for defectives in many States, among which, we are sorry to say, Missouri is not foremost. He has done more than any other American to promote the reformatory idea in prisons and the curative idea in institutions for the insane, making the latter hospitals in spirit instead of mere asylums.

There will probably be no memorial shaft raised by the public to honor this worker for humanity,*** but he is entitled to one.

A LECTURER UNDER THE AUSPICES OF THE A. M. A. gives preference to publicly furnished vaccine serum, over that privately selected by practicing physicians. We do not concur in this. No better or purer serum than the Parke Davis & Co's

exists. We have seen the process of production under perfect antiseptic precaution. The physician who chooses and introduces Parke Davis & Co's serum makes no mistake in selection. This is neither a paid nor a solicited advertisement.

PROFESSORS POLDORI AND MONTESANO, the alienists who, by the order of the court, presiding in the Cammorist trials in Italy, examined Genaro Abbatemaggio, the Cammorist informer and found him to be sane.

Professor Ottolenghi of the University of Rome, for the defence, reported the mental condition of the informer as good but modified his opinion by saying "a fuller study of the man would be necessary before it would be possible to say whether Abbatemaggio is insane or merely a liar."

Signor Iioy one of the counsel for the defence, requested the court to permit him to act as an expert, whereupon the president, losing patience, said:

"You wish to pass for an anthropologist, while you speak as a shoemaker."

Thus do doctors of medicine as well as doctors of divinity and moral philosophy disagree.

THE ARMY CANTEEN.—Following is the conclusion of the Editor's answer to the letter of Dr. W. W. Keen on behalf of the Medical petitioners for the restoration of the Army Canteen with alcoholic social drink provision.

In view therefore of the perillously toxic and destructive power of alcoholics and the danger to so many developing uncontrollable drink thirst and dipsomania, as clinical observation shows, I can not as a physician favor any method of promotion of social alcoholic drink habits in the American Army or Navy. Diluted alcohol is not fit to be used as a beverage.

WE ABRIDGE AND QUOTE from a *Lancet-Clinic* editorial: "Money and its overweening importance in this country devoted to material interests is the dominant factor in most committees. The public health—what care the solons sent by an unthinking people to legislate in its behalf for the public

health? Nothing whatever. We therefore hasten to commend the attitude of the New York *Evening Journal* in demanding the establishment of a Committee on Public Health in the House of Representatives."

CORRESPONDENCE.

The Canadian Practitioner and Review has this interesting and essentially true correspondence signed "Medicus."

CORRECT MEDICAL TEACHING.

SIR,—After looking through many recent calendars of medical colleges I have reached the following conclusions:

1. That medical faculties which do the best and most practical work in fitting students for their duties at the bedside of their patients, are those who are educated by faculties of moderate size and made up in every teacher's case (whatever he may teach) of most carefully selected medical practitioners of good general and professional education in the entire profession, and possessed of marked teaching power.

2. That each branch of medical knowledge to be taught should be placed under the responsibility of a thoroughly competent teacher, and only to be interfered with in the discharge of his duties when he either becomes, from age or illness, or any cause, unable to continue to discharge them in such a manner as every good and competent teacher is expected to do.

3. To divide up subjects into sections, giving each teacher only a small part of a subject to teach, can only secure unsatisfactory, because very unequal and unpractical teaching, and as a rule is injurious to medical classes.

4. Clinical work cannot be too abundant if it be well and conscientiously given, but is greatly more useful when one or more good, full didactic courses of lectures, carefully prepared and well delivered, have been listened to in all practical subjects—indeed unless this is done clinics are largely useless, for the majority of students will not read up their work alone,

as they might be expected to do—probably not more than 5 to 10 per cent of average students would, whatever they may promise, carry out their promises; and besides the impressiveness of really earnestly delivered good lectures is one of the very best ways of urging men to study. This has been my life experience, and is, I believe, that of all good medical teachers I have ever known. The only men I ever knew opposing didactic teaching are those who were unable, in one or in many ways, to make it interesting to the classes they address.

Practically the best medical colleges are those which have the predominant feature of which experienced teachers knowing how to appropriate or impart for clinical purposes the right and tried results of the laboratories—biological, chemical, microscopical, appropriated by practical and clinical capability to the needs of correct diagnosis and therapy.

OBITUARY.

DAVID R. WALLACE, A. M., M. D., LL. D., born in Pitt County, North Carolina, November 10, 1825, died in Waco Texas, on the 21st of November, 1911. *The Texas Medical Journal* informs us that his paternal grandfather, one of three brothers, came from Scotland during the Revolutionary War, and was with Washington at the surrender of Cornwallis at Yorktown.

He was liberally cultured in literature and in his profession. He was an upright genial gentleman and a cordial friend. He served worthily as a confederate surgeon during the late "unpleasantness between the States." He was a student of psychological medicine, serving from 1874 to 1879 and from 1883 to 1891, as superintendent of hospitals for the insane in Texas, for which position he relinquished extensive private practice. "Dr. Wallace was an active and later an honorary member of the American Medical and Psychological Society, Vice-President of the American Medical Association and one of the founders and the second President of the Texas State

Medical Association; President of the McLennan County Medical Society, and corresponding member of several foreign bodies."

By his devotion to science, literature and humanity he adorned his profession and every walk in life in which he moved. Our first acquaintance with Dr. Wallace began many years ago when he took issue with the postulates of our contribution before the Medico-Psychological Association on the psychical and physical, though he afterwards became a convert. After that we knew him well. Nature bestowed on mankind, no truer gift of manhood than he.

DR. SAMUEL WILKES, honored and venerable in the profession of medicine and before the people of his own and other countries, died in London, Nov. 8th, of last year, aged eighty-seven years.

His reputation for probity, charming personality, charity and splendid professional ability and achievement were universally known and acknowledged. He shone brilliantly in the ranks of neurology and general medicine. His treatise on the nervous system and clinical and therapeutic skill therein were but a part of his great and conspicuous merit.

He adorned all the honorable positions and titles he ever held. Besides his M. D. he was LL. D., F. R. C. P., T. R. S., etc. and president of many societies and headed many movements for the welfare of mankind.

IN MEMORIAM.

DR. GEORGE FIELDING BLANDFORD.—Dr. Blandford died at Tumbridge Wells in last August. He had been active as a member of the British Medico-Psychological Association and ex-president, also one of the former editors, of the *Journal of Mental Science*.

The editor of the *Alienist and Neurologist* had the honor of a brief personal and a more extensive literary acquaintance

with the distinguished lamented. With thankful appreciation of his meritorious contributions to the literature of psychiatry and alienism and with gratitude for personal professional benefit received through his bestowals the writer joins the general attestation of bereavement.

Tho' gone away for aye he yet abides with us, in grateful remembrance of the good work he wrought for us, for psychological medicine and the welfare of the mentally maimed throughout the world.

Dr. Blandford's memory, says the *Journal of Mental Science*, must always be connected with the history of the Medico-Psychological Association as one who largely helped during the fifty-four years of his membership to its successful establishment. He was a worthy contemporary of such men as Maudsley, Bucknill, Hack-Tuke, Skae and many other distinguished members.

A full account of this distinguished alienist's eminent career may be found in the October, 1911, number of the *Journal of Mental Science* for which we regret not having space.

REVIEWS, BOOK NOTICES, REPRINTS, ETC.

ANDREAS VESALIUS. *

THE REFORMER OF ANATOMY, BY WALTER LINDLEY, M. D., LOS ANGELES.—In Southern California Practitioner, Andreas Vesalius, the Reformer of Anatomy, died on an island in the Ionian Sea in 1564, the year that Shakespeare was born, while William Harvey made his first demonstration of the circulation of the blood in Saint Bartholomew's Hospital in 1616, the year that Shakespeare died. Writers have frequently expressed wonder at the great amount of anatomical and physiological knowledge to be found in Shakespeare's dramatic works, but the fact is he lived during the time of the most active anatomical research; and literary and scientific publications were teeming with new discoveries. Like Maeterlinck—the modern Shakespeare—Vesalius was a native of Belgium. He had an ancestry of medical scholars. The family name was Wesalius from the town of Wesel, and three weasels are in the Vesalian coat of arms.

Andreas's great, great-grandfather, Peter, wrote a treatise on the works of Avicenna, the Arabian philosopher and physician who wrote the Canon Medicinal, 1025 A. D. Peter's son John was physician to Mary of Burgundy, the wife of Maximilian the First, and the professor of medicine in the University of Louvain. Andreas's grandfather, Eberhard, was noted for his writings on Hippocrates and was also an able mathematician. The father of our Andreas was also Andreas by name. He was apothecary to Charles the Fifth and

*Andreas Vesalius, the Reformer of Anatomy. By James Moore, Ball, M. D. Saint Louis: Medical Science Press, MDLCCCX. Do you love a beautiful book? Do you love history? Do you love your profession? Then get a copy of this life of Andreas Vesalius by Dr. Ball and you will prize it as highly as any book you have in your library.

Margaret of Austria and remained in the imperial service until the day of his death, in 1546.

As a boy our Andreas learned to swim by the aid of bladders filled with air and noted their elasticity. He soon began the practical study of anatomy by dissecting mice, moles, rats, dogs and cats. He became especially proficient in the Greek and Latin languages. When seventeen he went to Paris to study medicine, where, at that time Jacobus Sylvius was the most popular medical teacher. Young Vesalius was looking for opportunities to dissect the human body. He haunted the cemeteries for materials for a skeleton, and one night he and some fellow students were attacked by fierce dogs. He became master of the osseous system and was able when blindfolded to name and describe any part of the skeleton which was placed in his hands. One night he climbed a gallows where a noted criminal had been executed by being slowly roasted. The birds had picked the bones clean, but the tendons held the joints together. One finger, a patella, and a foot were missing. To supply these missing bones he climbed another gallows and thus had a human skeleton complete. He became the most noted anatomical and surgical teacher of his day.

To give the reader an idea of his ability as a teacher, let us follow one of Vesalius's public courses in anatomy. It is the month of December, in the year 1537. Vesalius is twenty-three years old. The report has spread that the young Belgian professor will begin his course. Long before the hour set for the lecture, every available seat has been taken and many persons are standing. An audience comprising the professors of the university, the students of medicine, officials of the city of Padua, and learned persons of all ranks, including members of the clergy, numbering more than five hundred persons, has assembled to do honor to the professor of anatomy.

Vesalius comes into the arena and walks to the table, which is closely surrounded by his auditors. He wastes no time; after a few preliminary remarks on the importance of anatomy and the methods of acquiring a knowledge of this science, he launches into the practical demonstration. After rapidly pointing out the divisions of the body, and demonstrating the skin, joints, cartilages, ligaments, glands, fat and mus-

cles, he passes to the more complex parts, all of which are shown upon the skinned body of a dog or of a lamb, in order to conserve the human material. Now the human cadaver is placed on the table; all eyes are turned upon it, for such a demonstration occurs only at long intervals. Vesalius speaks first of the difference in the structure of joints at different ages and in different sexes, illustrating his remarks by means of drawings and by an abundant supply of bones of man and of the lower animals.

Now comes the dissection. This is made rapidly and in regular order. Its course depends upon the amount of material at hand; if the professor resorts to two bodies, as in the year 1538, the demonstration is handled in grand style. Vesalius uses the first body for a comprehensive examination of the muscles, ligaments and viscera; whilst the second cadaver is devoted to the relations of the veins, arteries, nerves and viscera. The text of the *Fabrica* is written according to this plan of public dissection.

At one time Vesalius attempted to teach the whole of anatomy on one cadaver. In this event, osteology was followed by the dissection of the abdominal muscles layer by layer, the demonstration closing with an examination of the entire contents of the abdomen. The pelvic organs were reached by incision and separation of the symphysis pubis. If the cadaver was that of a female, the dissection began with the mammary glands and then passed to the inferior venter. In pregnancy the foetal membranes were removed intact, and were placed in a vessel filled with water. The foetus was opened and its anastomosing vessels were found. For demonstrating the cotyledons, the uterus of a sheep or goat was used. After the thorax had been raised by means of a log or brick, Vesalius passed to the face and the anterior part of the neck, freely exposing the muscles on one side and the vessels and nerves on the other. Then followed the unilateral preparation of the muscles of the shoulder and back, then those of the mouth, which were approached by means of division of the lower jaw; and, finally, the pharynx and the larynx were exposed. The rectus anticus muscle was next brought into view, whereupon Vesalius detached the head from the vertebral column. De-

capitation was followed by an examination of the cranium; the skull-cap was saved and the brain was dissected in its natural position. Then came the examination of the eye; which Vesalius dissected in two ways: either by a complete section, or layer by layer from without inwards.

The ear and the cavities of the frontal and sphenoidal bones were next opened, provided these bones were not needed for the setting up of a skeleton. Finally he took up the extremities, demonstrating the muscles of an arm and a leg on one side, and the nerves and vessels on the other. The anatomy lesson ended with the introduction of numerous vivisections.

Fearing to tire his audience with too much variety, he confined his students closely to the structure of the human body.

The merit of Vesalius's public dissections, and the impression which they made upon his auditors, can be appreciated only by comparison with similar demonstrations made by his predecessors. The large and enlightened audience remained day by day for a period of three or four weeks. He says not a word about the physical and mental strain incident to such a strenuous course, in which his entire time was employed. The courses brought great financial profit to the professor.

On two occasions, probably in the years 1539 and 1540, Vesalius was called from Padua to Bologna to conduct public dissections. This was a great honor, for Bologna was the city in which Mondino had revived the practical teaching of anatomy. These courses were conducted by Vesalius in a wooden building erected for that particular purpose.

Vesalius was the author of several valuable works. His *Opus Magnum* was the "*Fabrica*." The first edition of the "*Fabrica*" is a folio volume with magnificent illustrations on wood printed by Joannes Oporinus of Basel in 1543. The anatomical plates are remarkably fine. One writer, speaking of the "*Fabrica*," says: "It was and is a glorious book, a rare and precious monument of genius, industry and liberality." The drawings in this work were done by some great artist and have generally been credited to Titian, who was sixty years old when the work appeared.

Vesalius's words in this work led up to Harvey's great discovery of the circulation of the blood a few decades later. He says: "There is hardly a single vein going to the stomach, the intestines, or even the spleen, without its accompanying artery, and nearly every member of the portal system has a companion artery associated with it in its course. There is through the arteries and veins a mutual flux and reflux of materials."

In 1544 Vesalius retired from the university and went to live in Madrid as physician to Charles the Fifth. In 1564 he made a pilgrimage to the Holy Land and while returning was caught in a storm in the Ionian Sea and his ship was wrecked on the island of Zakythos, where on the 15th day of October 1564, he died of exhaustion.

This abstract is a high tribute to the medical historic research and versatile genius of our fellow medical townsman, the author quoted from, Dr. James Moores Ball, Professor of Ophthalmology in the Barnes-American Colleges, now merged as one whose volume on Vesalius is a master piece.

NOTES AND REVIEWS of the Journal of the American Public Health Association under the caption Personal Hygiene. Dr Percy G. Stiles, Assistant Professor of Physiology in Simmons College, Boston, Mass., discusses from a new point of view Emotion and Secretion. Everyone is familiar with the fact that the experience of any marked emotion is attended with characteristic innervations of the muscles, resulting in facial expressions and bodily postures more or less easily interpreted by a looker-on. These muscular contractions are usually regarded as the objective sign of what is felt by the subject, but we have lately become accustomed to the view that they are to a great extent the actual source of his feeling. This is the basis of what is known as the James-Lange theory of emotions. The contractile tissues involved in such responses to central disturbances include not merely the skeletal system, but the cardiac and the visceral muscles as well.

Physiologists have found that the efferent nerves are not limited in their scope to the control of contractile structures. Their fibres often terminate in connection with the cells of

glandular epithelia, and over such cells the centers have a very positive influence. Secretory fibres have been demonstrated for the salivary glands, for the sweat glands, and for the glands which produce the gastric juice. Their existence for the tear glands scarcely calls for laboratory exposition. In the case of some organs yielding secretions we have less evidence of direct nervous regulation of the processes taking place in the cells. The liver and the kidneys are not so clearly under central government as are the glands just mentioned. Indirect control, through changes of blood-supply, is to be looked for in every instance.

Since the nervous system plays upon the glands, as well as upon the musculature of the body, it is probable that any widespread disturbance among its elements will affect the character and the amount of the secretions. This is not altogether a new idea. Sweating in fear and under other emotional conditions is familiar enough. Suppression of the flow of saliva seems to be common and is one of the occurrences which suggest that inhibitory as well as excitatory powers over glands are provided for. Rather indefinite notions prevail that the composition of milk may be altered, and that it may even be made somewhat toxic as a result of distressing experiences. Recently we have been brought to see that further possibilities certainly exist. There are various organs which elaborate active products destined not to be discharged to the external surface of the body, nor into the lumen of the alimentary canal, but to blend with the circulating fluids. Such organs are said to form internal secretions and our appreciation of their influence is constantly widening. It is to be expected that the internal secretions, quite as distinctly as the external, will be found to be modified in amount, and perhaps in character under the sway of changing central conditions. If these organs do not receive true secretory fibres they at least have vasomotor supplies through which the local activity may be intensified or reduced. Dr. W. B. Cannon, to whom we owe so large a share of our knowledge of the properties of the digestive tract, has now opened a new field full of promise and suggestion. He has shown decisively that, in one case at least, an active internal secretion is produced in increased amount under cir-

cumstances of emotional turmoil. It becomes reasonable to anticipate more disclosures of a similar sort.

The secretion studied by Dr. Cannon is that of the adrenal body. This is a principle of such powerful drug-like characteristics that it is detectable in extremely small quantities. Any significant increase of it confers on the blood the property of causing vascular constriction, dilation of the pupil, and inhibition of intestinal peristalsis. It has been observed that these effects are all such as may be caused by stimulation of the sympathetic system. Furthermore it is true that all these, together with acceleration of the heart, another sympathetic symptom, form part of the picture of painful emotion. Dr. Cannon terrified a cat by holding it helpless in the presence of a barking dog. Samples of the blood of the cat taken after the ordeal and compared with those taken before, gave clear evidence of the addition of adrenalin under the stress of the trial.

Many interesting questions suggest themselves. Is such a production of adrenalin of service to an animal in an emergency? Has it any relation to the "strength of desperation" which is often so surprising a manifestation? Does its lingering in the circulation account for the after-effects of profound emotion which so greatly outlast the active phase? An attempt to discuss these questions would be premature. We need to know whether the thyroids and parathyroids, the pituitary body and other structures are similarly involved. But we can already realize more justly than we have yet done how far-reaching is the physical registration of the emotional process and how potent it must be for good and for evil.

Much more might here be said if space permitted of the widening and lengthening of the Sajous' discoveries.

The adrenalin suggestion above is an interesting conjectural explanation quite as interesting as the albuminous and glycosuric secretion of chained and distressed dogs.

THE RELATION OF THE MEDICAL PROFESSION TO THE PEOPLE
is the subject of a valuable paper read by invitation by
Dr. J.C. Wilson, Emeritus Professor of Practice of Medicine
and Clinical Medicine, Jefferson Medical, College, before

the last meeting of the Mississippi Valley Medical Association, at Nashville, Tenn., from which we extract as follows:

The organization of the medical profession but lightly touches the people. They only most remotely comprehend its aims and are incapable of a dispassionate consideration of the means by which it is striving to realize them. They are in no sense bound to it and so long as they are in good health, regard themselves as altogether above and independent of it. So far are they from being influenced by its powers to restore, which must appear in every sense mysterious to them, that they form organizations to undermine the results of scientific investigations concerning the causation and course of diseases and to prevent such investigations. Hence anti-vaccination societies and anti-vivisection societies. It is thus seen that there are many people who are wholly indifferent to the medical profession; some that are actively hostile to it. Those who are indifferent so long as they are well and who at once demand the services of the most experienced and skillful physicians when they are injured or ill, afford material for an unpleasant psychological study. Those who are hostile are influenced by the most transparent motives. They comprise two general groups—the first of which is made up of fanatics and persons of unsound reason and subject to delusions, persons who profess to be healers without any real knowledge and those who are pure charlatans and scamps, but the lines of separation between these sub-groups are not at all sharply drawn. The second group is composed of the dupes and victims of those who constitute the first group. These last, alas, too often have the courage of their convictions and not only pour out money freely, but also sometimes let their children die of curable diseases, rather than accept the services of a qualified medical practitioner. It is creditable to the general common sense of mankind that with so many temptations to practice it, quackery is on the wane.

There should be more such contributions from similar sources.

REPORT OF THE PROCEEDINGS OF THE STATE BOARD OF HEALTH.

This remarkable report is before us. It assumes, declares

and acts with autocratic authority in the unmaking of state chartered medical schools, chartered with diploma granting rights before this political Board was appointed, by placing them on its discredited list on most frivolous pretexts, as finding a school without a hood in its chemical laboratory or an adequate library for students occupied with work from 8 A. M. to 6 P. M. daily, without time for library reference and finding mostly old books, which are in fact the most interesting and valuable for reference and comparison during the little leisure the students have, except for the text book which the students should personally own.

It finds another college giving credit for time to a student who had studied a full term in one of its disapproved regular medical schools for the reason that it was a night school. One college did not have skulls enough, as if every subject dissected did not have at least one skull attached to it which the students generally take home with them.

One dissecting room had plenty of ribs and other bones but the skulls had been taken home leaving a dearth of skulls in the college; another complaint was an unclean laboratory in vacation. The dispensary records were not kept satisfactorily to the Board's ideals and a few other frivolous objections connected with the management, but no word of complaint as to the essential teaching ability of the faculty, the length of curriculum of any school, preliminary qualifications, etc.

On this kind of specious objection this Board, none of whom had expert medical college teaching or managing knowledge, summarily discredited chartered teaching plants worth many hundreds of thousands of dollars and put out of business worthy institutions of years in building up and representing great capital and inestimable labor bestowed by their faculties.

This is murderous, slanderous and tyrannically unwarranted in law and legal or moral right. It is the star chamber and the guillotine in the twentieth century of Free Fair Play America.

Already this Board has been haled into court by the justly aggrieved colleges and their several alumni and friends can not fail to resent this great wrong and all right minded men must condemn this Board. Its reasoning and action

would be laughable but for its serious consequences to the inalienable rights to character and property.

PROGRAM OF MEDICAL LECTURES TO THE PUBLIC, arranged by American Medical Association (Public Health Education Committee) at the St. Louis Medical Society Hall, 3523 Pine Street, on alternate Thursday afternoons and evenings, from January 18 to March 21, 1912. Better late than never is this attempt to "enlighten the people" on essential matters medical and sanitary. The profession has too long neglected this code and self-preservation enjoined duty to the medical body and the public.

This duty was wisely suggested by President Burrell of the A.M.A. and has been put into practice by Harvard and some other schools, especially by the medical school in affiliation with Barnes University, St. Louis. All medical bodies should do it by election and putting forward of their best men to let all the people know what medicine is doing toward professional progress in care for the sick and prevention of disease.

The unwise, unjustifiable and in a sense delinquent and criminal misconstruction of the code as to public advertising viz: "that it is unethical for physicians to resort to public cards or private hand bills calling attention to special skill in particular disease because these are the ordinary practice of empirics" and applying this to all public advice on medical subjects and without intention to laud one's medical skill, has too long handicapped medical appreciation, by indirectly permitting, without the counteracting disseminating of true medical knowledge, the growth of fatal fads and villainous murderous quackery, killing by indirection and delayed right treatment, if not outright, for this imperative duty of public medical enlightenment should be performed and encouraged by all good men on timely occasions and not alone undemocratically selected by an American Medical Association committee without referendum or recall. The treatment of certain worthy but unendowed medical colleges by State Health Boards discrediting them, has also emboldened quackery.

Let the profession take up the subject in every community

and inform the public everywhere of the work and merits of the American medical profession and its colleges.

Give the people the true light and they will not be led away by the false and illusory lights of quasi truth, humbuggery or criminal quackery and deception. Give the newspapers a chance to see the wrong side of disseminating the fatal errors of charlatanry in their medical advertising pages.

UNDER HEAD OF MALPRACTICE LIABILITIES. (*Burnham vs. Stillings and another* (N. H.), 89 Atl. R. 927.)

In proof of the existence of the constitutional taint to which the defendants ascribed the plaintiff's poor recovery, they offered evidence that shortly after the administration of iodid of potassium (KI), a specific remedy for syphilis (the taint suspected), union of the bone began, or, in the language of the physicians, callus was thrown out. Hence, as the case turned, it became a vital question whether the improvement shown after the administration of that drug indicated the presence of syphilis, hereditary or acquired; or, in other words, whether iodid of potassium (KI) is a specific for syphilis. In the cross-examination of a Dr. Beaton, an expert called by the defendants, after he had answered that iodide of potassium is not one of the best remedies for softening of inflammatory products and the removal of exudates not of syphilitic nature, he was asked, "Isn't that laid down so in the United States Dispensatory, and is not that book in every drug store in the land?" Then in argument, the plaintiff's counsel said: "Now let us go into this KI a little more. Why, when they said KI is used for syphilis, we had to look it up, and we found this laid down in the United States Dispensatory book, which Dr. Beaton admits is in every drug store in the land, and he says they were obliged to have it. Perhaps you, gentlemen, have seen the big book on the prescription case. "Iodid of potassium for softening inflammatory products and removal of exudates not of a syphilitic nature is one of the most reliable remedies we have." In that there was reversible error because the book was not received or offered as evidence. If medical treatises of authority are admissible as substantive evidence they cannot be admitted without proof that they are regarded

as authoritative, neither can their contents be shown except by the production of the book. Conceding that the reference to the dispensatory was properly in the case on the issue of Dr. Beaton's credibility because competent thereon, or because the defendants did not object when it was offered for that purpose, the statements of the dispensatory were not in the case as substantive evidence, for the simple reason that the dispensatory was not offered as such evidence.—*Journ. A.M.A.* Dec. 9, 1911.

STUDIES IN PSYCHIATRY, VOL. 1. This is No. 9, of the Nervous and Mental Disease Monograph Series by Members of the New York Psychiatric Society, 1912, edited by Smith Ely Jelliffe and Wm. A. White. The contributions are by Jelliffe, Dana, Pearce Bailey, Pierce Clark, Tyson Peterson, Meyer, Hoch, Cotton, Diefendorf, Dodge and C. Macfie Campbell, all well known American medical writers and neurologists of merit.

Nervous and Mental Disease Monograph Series No. 10, **Handbook of Mental Examination Methods** by Shepherd Ivory Franz, Ph. D. New York, 1912.

The present work is the direct outcome of a series of lectures and demonstrations of neurological and mental examination methods which the author gave in a course to the internes of the Government Hospital for the Insane, first in 1910 and again in 1911. It is also partly due to repeated suggestions that the scheme of examination first published in White's "Outlines of Psychiatry" (Chapter 7) be elaborated. The book is intended to place in the hands of psychiatrists, neurologists and students methods of examination which have been successfully used in psychological practice, to the end that the mental examination of patients may be conducted in a more systematic and scientific manner.

An endeavor has been made to select methods which not only serve to show certain phases of mental processes, but which at the same time are easy to perform and are sufficiently accurate for certain kinds of research as well as for routine clinical purposes.

This valuable book is timely in diagnostic medicine, for

clinical psychiatry is coming into its own with a place at the front in practice, as this magazine predicted it would when it was founded in the beginning of 1880, and the editor was delivering lectures on clinical and forensic psychiatry in St. Louis Medical College, now the medical department of Washington University. The author presents his theme well. The book is worthy of a place in every library of clinical and diagnostic medicine.

WHENCE AND WHITHER, OR THE EVOLUTION OF LIFE.—Thomas F. Neil, B. S., M. D. formerly Superintendent of Blair County Hospital for the Insane. Mirror Printing Co., Altoona, Pa. This little book is full of thought and truth. Its price is a trifle but its aim is grand. It is an infant in size in the book world. Far more diminutive than Drummond's *Natural Law in the Spirit World*, its scope is broader and more scientific, because it displays a physician's deeper and better supported thought and scrutiny of the great problem it discusses.

MORTALITY STATISTICS FOR 1910, ISSUED BY THE DEPARTMENT OF COMMERCE AND LABOR BUREAU OF THE CENSUS, WASHINGTON. E. Dana Durand, Director of the Census.

This bulletin will prove especially interesting and instructive to the readers of the *Alienist and Neurologist* and to all sanitarians. It ought however to be issued by a Public Health Bureau or Department of Public Health with proper suggestions for diminishing mortality and promote nation wide sanitation and consequent health conservation and mortality prevention emanating from sources of medical experience and wisdom. Some day, it is hoped, the American medical profession will be wise enough and sufficiently influential with legislators and people to secure the now neglected need of a Health Department of State with an eminent non-political medical man at the head thereof and a member of the President's Cabinet. A wise physician skilled our (unsanitary) wounds to heal there would prove "more than armies for the public weal."

THE PHILLISTINE gives this as one of its wise aphorisms—"Be patient with fools. You may be one yourself pretty soon" and on the back cover of this same magazine, a few leaves beyond this same aphorism in this same booklet, is the following unwise paragraph: "The man who leads in prayer seldom leads in anything else."

Many of the wisest and best have led their people in prayer. George Washington was known to be a leader in prayer. As a leader his sword was drawn in the spirit of prayer. The American Declaration was a protest against wrong, a plea and a prayer for the coming of the right.

Patrick Henry's plea and prophecy of triumph before the Virginia convention ended in the surrender of Lord Cornwallis at Yorktown. "There is a just God," he said, "who presides over the destinies of Nations and who will raise up friends to fight our battles for us." Elbert writes some times when his brain is tired and his psychic neurones wobble under psychasthenia. He should write more of mornings after brain tone restoring sleep. When you see such mistaken sentiments in the "Fra" set it down to psychasthenic cerebroasthenia because there appear better things than this in what he usually writes.

PARANOIA AND CERTAIN PARANOID CONDITIOINS IN THEIR RELATIONS TO THE PUBLIC AND THE PROFESSION. By C. B. Burr, M. D., Flint, Mich. From *The Journal of the Michigan State Medical Society*, October, 1911.

This excellent contribution to neuropsychiatry endeavors to draw clinical lines between ordinary and alcoholic paranoia.

A paranoid condition from alcoholism is differentiated from other insane states by:

1. The presence of a definite provocative factor—alcoholic indulgence.

2. The existence of delusions of persecution and infidelity, possibly also those of an expansive character, all quiescent under abstinence from drink, lighted into extreme activity by the inebriating cup.

3. The tendency toward recovery under well-directed treatment.

To summarize:

In paranoia there are present—Systematized, persecutory and expansive delusions of a logical character, unvarying in their expression.

In the paranoid form of dementia præcox—Delusions of a persecutory, expansive, erotic character, unsystematized and changing.

In the alcoholic paranoid condition— Definite delusions, mainly of suspicion and distrust; quiescent under ordinary conditions, active under alcoholic indulgence.

This paper closes with a compliment to President Taft in sustaining Dr. Wiley in his effort to protect the public from poisonous and deleterious foods.

THE "WELLCOME" PHOTOGRAPHIC EXPOSURE RECORD AND DIARY, 1912.—Whosoever desires in the least possible space of time to acquire a working familiarity with the principles and practice of modern photography may be confidently recommended to this little volume.

The 'Wellcome' Exposure Record is packed as full of photographic wisdom as an egg is full of meat, and its directions and observations on such matters as exposure, development, intensification and all the other fascinating processes which go to the making of pictures, are so simple and concise that no one need go astray.

SOME ROUGH NOTES ON MODERN DIAGNOSTIC METHODS.—

This brochure is sent out free to the members of the medical profession with the compliments of the manufacturers of Fellows' Compound Syrup of Hypophosphites. Some of our proprietary caterers to the therapeutics of the profession, among which we include the Fellows Company and others among our advertisers, are rendering a real service to the medical men of the country, especially to the younger doctors, in similar gleanings from current medical literature. Much of the information contained in its pages has been gathered from the under-mentioned works and is instructive and profitable reading. It is a *multum in parvo* for the prac-

ticing physician. Webster, Sahli, Cabot, Gruner, Bosanquet, Schmidt, Strasburger, Oliver, Noguchi and Osler.

THE AMERICAN RED CROSS invites attention to the exhibit in connection with the Ninth International Red Cross Conference to be held in Washington, D. C., from May 7 to May 17, 1912.

The exhibition will have two sections, one styled Marie Feodorovna and the other General. The former is a prize competition, with prizes aggregating 18000 rubles or approximately \$9000, divided into nine prizes; two of 3000 rubles each, and six of 1000 rubles each and one of 6000 rubles.

The subjects of this competition are as follows:

1. A scheme for the removal of wounded from the battlefield with the minimum number of stretcher bearers.
2. Portable (surgeons') washstands, for use in the field.
3. The best method of packing dressings for use at first aid and dressing stations.
4. Wheeled stretchers.
5. Transport of stretchers on mule back.
6. Easily folding portable stretchers.
7. Transport of the wounded between warships and hospital ships, and the coast.
8. The best method of heating railway cars by a system independent of steam from the locomotive.
9. The best model of portable Roentgen apparatus, permitting utilization of X-rays on the battlefield and at first aid stations.

Signed Charles Lynch, Major,
Medical Corps, U. S. A.

The various phases of psychiatry attendant upon army life, such as melancholia, nostalgia and the outbreak of positive mania and the forms of insanity and suitable provision for the attendant on army campaign life are not here included.

These latter morbid states made a marked impression upon the editor when he almost helplessly encountered them in service, for he was younger then and more inexperienced then than now.

DIFFERENTIAL DIAGNOSIS OF ALCOHOLIC COMA FROM OTHER FORMS OF COMA, WITH SPECIAL REFERENCE TO THE CARE OF UNKNOWN PERSONS FOUND BY THE POLICE ON THE STREETS IN A COMATOSE OR SEMI-COMATOSE CONDITION.—By Lewis D. Mason, M. D., Brooklyn, N. Y. from the Virginia Medical Semi-Monthly, December 23, 1910.

By the same author is another subject interestingly treated, viz: Moderate Drinking, its Dangers and Possibilities, an address delivered before the World's Temperance Centennial Congress held at Saratoga Springs, New York, June 18, 1908. Sent out by the National Temperance Society and Publication House, New York.

CONSERVATION OF THE SOIL.—Address of President Taft before the National Conservation Congress, at Kansas City, Mo., September 25, 1911. United States Department of Agriculture, office of the Secretary. A very important matter and an able address, but the conservation of the people who live on the evil and the mental eugenics of the voting minds of these same people is a greater theme for statesmen.

There are too many idiots outside the asylum and public homes and in public offices and Legislatures of the country for its highest welfare. The generation of imbecile voters ought to be prevented at the genital fount for the country's good.

We have too many unpatriotic psychic emasculates whose ancestors ought to have been unsexed before ever they were brought forth. A National Department of Public Health and advisor on popular hygiene and eugenics in the President's Cabinet is needed.

WEBSTER'S NEW INTERNATIONAL DICTIONARY.—This wonderful and supremely valuable book of verbal intelligence commands our admiration and merits appreciative thanks to its able projectors and builders.

The Boston Journal of Education says it is "the most remarkable single volume ever published," a statement we cordially endorse with the inclusion only of Shakespeare, Milton and the Bible.

The volume before us is not merely a new edition, nor is it only a late revision, it is, as its publishers truly tell us, a New Creation from cover to cover.

It contains every thing essential to the most complete of modern lexicons and more. It is a combined up-to-date vocabulary and abbreviated cyclopaedia, the best English word book extant, marvellously compressed in one magnificent volume of exceptionally clear though small type and accurate text. The separation of essential from non-essential words and slang or little used words is a special feature.

PSYCHOPATHOLOGIE LEGALE GENERALE COURS FAIT A L'UNIVERSITE DE SAINT-PETERSBOURG—Par Prof. Paul Kovalevsky, M. D. Membre honoraire de la société de médecine mentale de Belgique; membre honoraire de la société de médecine mentale de Hollande; corresponding member of the New York academy of anthropology; membre de la société medico-psychologique de Paris; membre de la société medico-psychologique de Londres; membre de la società Freniatria Italiana; membre honoraire de l'American National association for the study of epilepsy and the care and treatment of epileptics; membre honoraire de l'American association for the care of inebriates; membre de la société medico-légale de New-York, etc. Paris, Vigot Frères, Editeurs, 23, Place de L'Ecole-de-Médecine.

This is a well written and meritoriously presented book of interest and merit to every alienist and neurologist who reads French.

MEDICAL REVIEW OF REVIEWS INCLUDING AN INDEX MEDICUS, EDITED BY WILLIAM J. ROBINSON, M. D., 206 BROADWAY, NEW YORK, N. Y.—“A New Era in Medical Journalism.” Beginning with the January issue, the *Medical Review of Reviews* issued in a new idea of medical journalism breaking away from the beaten path of those magazines which have gone before it. This new departure in medical journalism is a decidedly commendable step forward and ought to meet with hearty professional approval. Therapeutic Medi-

cine is now absorbed with and by the *Medical Review of Reviews*.

The *Review of Reviews* promises for the coming year to serve no journalistic condensed milk to the profession in its editorials and to offer that solely derived from the breasts of Minerva Medica and that it will advocate the bringing forth of better babies and the raising of a higher type of human beings and that eugenics and its importance to society will receive adequate treatment in the *Medical Review of Reviews*, where will be discussed such subjects as the Ethics of Absorption, the Venereal Diseases, the Castration of Criminals, the Limitation of Offspring, Sexual Abstinence, and Marriage and Divorce.

It will maintain that since we live in the era of Preventive Medicine, not only the clinic, but the street, has become the doctor's domain and that numerous new topics must be discussed, dealing with the relationship of medicine to society, and bearing on the economic basis of disease.

It will endeavor to stimulate interest in the History of Medicine by devoting a special department to this subject, for no follower of Hippocrates can properly appreciate or understand his profession, unless he is acquainted with its origin, growth, struggles, errors and modern development.

"AN UNWARRANTED ATTACK ON THE PRESIDENT AND OTHER EMINENT MEMBERS OF THE AMERICAN MEDICAL ASSOCIATION AND ON THE LEADING MEDICAL JOURNALS OF THE COUNTRY."

The *American Journal of Surgery* for January has a self defensive article on the subject of this caption which ought to be read and pondered by every member of the A.M.A. and by every reputable medical society in the land of ostensible fair play and "home of the free and the brave." The Association Journal was not founded to become a censor of the members of the A.M.A. who conduct or own independent medical journals and has no right to exercise this damaging prerogative unless specifically so authorized by direct instruction of the Association that owns it and the editor of the A.M.A. If the A.M.A. departs from democracy in its government and becomes

plutocratic or autocratic the association will be in peril of disruption.

THE MODERN TREND OF PSYCHIATRY, by James V. May, M.D. Fishkill-on-Hudson, Medical Superintendent, Matteawan State Hospital. This is a well presented monograph from a source of competent clinical experience. The author's criticism of Freud, his discussion of Janet, the Wassermann reaction, Kraepelin, Nissl, Alzheimer, Ford-Robertson, Quincke, Widal, Ravaunt and others will interest neurological and psychological readers everywhere.

PREDEMENTIA PRECOX: THE HEREDITARY AND CONSTITUTIONAL FEATURES OF THE DEMENTIA PRECOX MAKE UP by Smith Ely Jelliffe, M. D., Ph. D. The Journal of Nervous and Mental Disease.

TUMORS OF THE PINEAL BODY with an account of the Pineal Syndrome, the Report of a Case of Teratoma of the Pineal and Abstracts of all Previously Recorded Cases of Pineal Tumors. Pearce Baily, M. D. ,and Smith Ely Jelliffe, M. D., New York, Reprinted from the Archives of Internal Medicine, Dec. 1911. Vol. 8, 851-880.

STATISTICAL SUMMARY OF CASES IN DEPARTMENT OF NEUROLOGY, VANDERBILT CLINIC, FOR TEN YEARS, 1900 to 1909. By Smith Ely Jelliffe, M. D., and A. A. Brill, A. M., M. D. from the Journal of Nervous and Mental Disease, Vol. 38.

THE MENINGEAL FORMS OF EPIDEMIC POLIO-ENCEPHALOMYELITIS, Smith Ely Jelliffe, M. D., Ph. D. Visiting Neurologist, City Hospital New York, from the Journal of the American Medical Association.

ON LESIONS OF THE MID-BRAIN, WITH SPECIAL REFERENCE TO THE BENEDICT SYNDROME, By Smith Ely Jelliffe, M. D., Ph. D., of New York, Visiting Neurologist City Hospital, from Interstate Medical Journal. Vol. XVIII, No. 8, 1911.

FRANCISCUS SYLVIVS by Smith Ely Jelliffe, M. D. from the proceedings of the Charaka Club.

THE DIAGNOSIS OF NERVOUS DISEASES, by Purves Stewart, M. D., M. A., Edin., F. R. C. P., Physician to out-patients, Westminster Hospital, Physician to the West End Hospital for Nervous Diseases, etc. Just published.

This volume approaches, and in a most masterly manner, the subject of the diagnosis of nervous diseases from the clinical standpoint. Abstruse details of purely theoretic interest are avoided. The book is pre-eminently a study of symptomatic phenomena for diagnosis.

The *British Medical Journal* ascribes to the author, the happy gift of giving the gist of the matter in a few pregnant sentences and of lucidity of expression.

Third edition, revised and enlarged, 8vo. about 500 pps. with 225 illustrations, and plates in many colors. Prepaid, \$4.50.

E. B. Treat and Company, 241-243 West 23rd Street, New York, are the publishers.

NERVOUS AND MENTAL DISEASES, THE NEW (7TH) EDITION REVISED BY CHURCH AND PETERSON. As we go to press this valuable treatise by these two eminent authors on nervous and mental diseases, Dr. Archibald Church, Professor of Nervous and Mental Diseases and Medical Jurisprudence in Northwestern University Medical School, Chicago, and Frederick Peterson, M. D., Professor of Psychiatry, Columbia University, hardly need further commendation than that given when previous editorials were noticed, yet the present revised edition brings this valuable text book of neurology and psychiatry quite up to the present date, February, 1912.

The diligence and learning of the able authors continue to enhance this book in the esteem of the neurologist, the psychiatrist and the general practitioner. This book is an octavo volume of 932 pages, with 338 illustrations. Philadelphia and London: W. B. Sanders Company, Cloth, \$5.00 net; Half Morocco, \$6.50 net.

THE RELATION OF THE PHARMACOPOEIA TO THE PRACTICE OF
MEDICINE, By Solomon Solis Cohen.

Like every word Solis Cohen utters good to hear, and read before an excellent and worthy assemblage, the American Pharmaceutical Association. We could not do without them.

SOME VALUABLE DATA FOR PHYSICIANS put out by the Purdue Frederick Co., the Gray's Glycerine Tonic people, 298 Broadway, New York.

ARTERIOSCLEROSIS, CARDIOSCLEROSIS, AND INTESTINAL PUTREFACTION. By Louis Faugères Bishop, A. M., M. D., New York, Clinical Professor of Heart and Circulatory Diseases, Fordham University School of Medicine; Physician to the Lincoln Hospital, from the *New York Medical Journal*.

Whatever Bishop writes is worthy of consideration. He maintains that arterio-sclerosis is synonymous with Brights disease. He believes that the vast majority of cases of arterio-sclerosis are due to intestinal putrefaction.

The Diagnosis of Acute Poliomyelitis. By L. Harrison Mettler, A. M., M. D., Professor of Clinical Neurology in the College of Medicine of the University of Illinois, Chicago. Reprinted from the *Illinois Medical Journal*.

Neurology and Sociology. By L. Harrison Mettler, A. M., M. D., Chicago, Ill. Reprint: *The Medical Herald, St. Joseph, Mo.*

Tropical Diseases and Health in the United States. By John M. Swan, M. D. Medical Director of the Glen Springs; Secretary of the American Society of Tropical Medicine, Watkins, N. Y. From *The Annals* of the American Academy of Political and Social Science, Philadelphia.

The Hydrotherapeutic Treatment of Heart Disease. By John M. Swan, M. D., of Watkins, N. Y. Medical Director of The Glen Springs. Reprint from the *Interstate Medical Journal*.

The Modern Trend of Psychiatry. By James V. May, M. D., Fishkill-on-Hudson. Medical Superintendent, Matteawan State Hospital. From *Interstate Medical Journal*, a valuable and timely paper.

Economic Loss to the People of the United States through Insects that Carry Disease.

U. S. Department of Agriculture, Bureau of Entomology—Bulletin No. 78 (Revised). By L. O. Howard, Entomologist and Chief of Bureau. Issued May 27, 1909, Washington.

Fake Gall-Stone Cures: Olive Oil and "Salts" Used as an Accessory to Quackery. "Our national quality of commercial shrewdness fails us when we go into the open market to purchase relief from suffering." By Samuel Hopkins Adams. From *Journal A. M. A.*

Some Distinct Psychoneuroses Common to All Cases of Inebriety and Alcoholism. By T. D. Crothers, M. D., Hartford, Conn. Superintendent Walnut Lodge Hospital. From *The Lancet-Clinic*, December 16, 1911.

Public Health Bulletin No. 45, A Digest of the Laws and Regulations of the Various States Relating to the Reporting of Cases of Sickness. By John W. Trask.

Public Health Bulletin No. 49, Ophthalmia Neonatorum. An analysis of the laws and regulations relating thereto in force in the United States. By J. W. Kerr, Assistant Surgeon General, prepared by direction of the Surgeon General.

Radiculitis. By F. W. Langdon, M. D., of Cincinnati. Professor of Psychiatry in the University of Cincinnati, Medical Department, Medical Director of the Cincinnati Sanitarium. From *The Journal of Nervous and Mental Diseases*.

Surgery of the Liver. A Series of Liver Cases in which It Was Necessary to Remove a Segment of the Liver or to

Suture Torn Areas. By Thomas S. Cullen, M. D., Baltimore, Maryland. From *Surgery, Gynecology and Obstetrics*.

The Physiology and Pathology of Psychic Philosophy. By J. T. Searcy, A. B., M.D., LL. D. Superintendent of the Alabama Insane Hospitals. Reprinted from *The Dietetic and Hygienic Gazette*.

Twentieth Annual Report of the Rochester State Hospital at Rochester, N. Y. to the State Commission in Lunacy for the year ending 1910. Announces that it has completed and partly furnished a laboratory and a desirable addition to every modern hospital for the insane.

Organized Medicine; Its Influence and Its Obligations. By John B. Murphy, M. D. Chicago. Copyright, 1911 American Medical Association. See editorial pages.

A Remarkable Case of Epilepsy Caused by Eyestrain. By George M. Gould, M.D., Philadelphia, Pa. From *Buffalo Medical Journal*.

Serious Mental Disturbances Caused by Painless Dental Lesions. By Henry S. Upson, M. D. From the American Quarterly of Roentgenology.

Eleventh Biennial Report of the Trustees and Superintendent of the Western Hospital for the Insane near Bolivar, Tennessee. From December 19, 1908 to December 19, 1910.

The Scaphoid Scapula Syndrome; Its Connection with Syphilis in the Ascendants. By William W. Graves, M. D., of St. Louis. From the *Interstate Medical Journal*.

The Scaphoid Scapula a Frequent Anomaly in Development of Hereditary, Clinical and Anatomical Significance. By William W. Graves, M.D. St. Louis, Mo. Assistant Professor in Neurology in the St. Louis University School of Medicine. Reprinted from the *Medical Record*.

These several contributions indicate close and original observation and are worthy of neurological consideration and should receive it.

A Consideration of Renal Anomalies with the Presentation of Two Unique Cases. By W. A. Newman Dorland, A.M., M.D., Chicago, Illinois. From *Surgery, Gynecology and Obstetrics*.

Intra-Uterine Ophthalmia Neonatorum. By W. A. Newman Dorland, A.M., M.D. Chicago. From the *Journal of the American Medical Association*.

The Prevention and Treatment of Post-Operative Ileus. With Illustrative Cases. By W. A. Newman Dorland, A.M., M.D., of Chicago. Professor of Obstetrics in the Medical Department of Loyola University; Visiting Obstetrician and Gynecologist to Jefferson Park Hospital, etc., etc., From the *Medical Era*.

Something More About Anemopsis. By John Fearn, M.D. Oakland, Cal. From the *California Eclectic Medical Journal*.

Bromide Therapy. The Importance of Purity. Hepatic Stimulation. A readable and instructive brochure put out by the Peacock Chemical Company, one of the profession's best therapeutic caterers, and a thoroughly reliable firm.

The Diagnostic Value of the Use of the Sphygmomanometer in Examinations for Life Insurance. By J. W. Fisher, M. D., Medical Director the Northwestern Mutual Life Insurance Co. Read before the Association of Life Insurance Medical Directors.

The Campaign Against Cancer: Educational, Experimental and Clinical. By William Seaman Bainbridge, A. M., Sc. D., M.D. Professor of Surgery, New York Polyclinic Medical

School and Hospital, New York City. From *American Journal of Dermatology*.

Bisulphate of Quinin in the Treatment of Acute and Sub-Acute Gonorrheal Urethritis. By Albert E. Mowry, M.D. Clinical Assistant Genito-Urinary Surgery, Northwestern University Medical School.

Bacterial Vaccines, Tuberculins and Serums. Parke, Davis & Co., Detroit, Michigan.

A bacterial illustrated showing of interest to all physicians containing many facts of general medical interest showing also the good therapeutic work of this good house and free for the asking.

Adams-Stokes Disease With Complete Heart Block, Showing a Conspicuous Lesion in the Path of the Auriculoventricular Bundle. By Louis Faugeres Bishop, A.M., M.D., Clinical Professor of Heart and Circulatory Diseases in the Fordham University School of Medicine, New York City; Physician to the Lincoln Hospital. From the *American Journal of the Medical Sciences*.

The Specific Treatment of Pellagra With Observations on the Reactions Following Salvarsan in Syphilis and Pellagra. By Dr. E. H. Martin, Hot Springs, Ark.

"A Plot Against The People." An Attempt to Pervert the Pure Food Law. This brochure was sent out last March by the Canadian Club whisky people, Hiram Walker & Sons, but Dr. Wiley is still "doing business" for the people "at the old stand."

The Technic and Results of Deep Injections of Alcohol for Trifacial Neuralgia. Hugh T. Patrick, M.D. Clinical Professor of Nervous and Mental Diseases, Northwestern University Medical School, Chicago. From the *Journal of the American Medical Association*.

The Sei-I-Kwai Medical Journal Office. Sei-i-kwai in Tokyo Charity Hospital Medical College, Atago-cho, Shiba, Tokyo.

The Clinical Recognition of the Scaphoid Type of Scapula and of Some of its Correlations From the *Journal of the American Medical Association*. By Doelor.

Some Points In The Operative Technique of Vaginal Hysterectomy For Prolapsus. By Thomas S. Cullen, M. D., Baltimore, Maryland. Reprint from *Surgery, Gynecology and Obstetrics*, March, 1910.

A Right Pelvic Kidney, Absence of the Left Kidney; Absence of the Uretus; Both Ovaries in the Inguinal Canals. By Thomas S. Cullen, M. B., Baltimore, Maryland. Reprint from *Surgery, Gynecology and Obstetrics*, July, 1910.

Delayed Menopause. Its Dangers and Therapeutic Indications. With a Table showing the Approximate Age when the Menopause Should Be Established. From the *New York Medical Journal* for June 18, 1910.

Vaginoureterostomy after Nephrectomy for Pyonephrosis Due to a "Sigmoid" Constriction of the Ureter. By Ibid. Reprinted from the *Medical Record*.

Therapeutic Drainage in One Hundred and Eighty-Five Cases of Uterine Obstruction. Presenting a New Fenestrated Rubber Uterine Drain. By Ibid. Reprinted from the *Medical Record*, April 16, 1910.

Panhysterocolpectomy, Complete Excision of the Vagina for Prolapse of the Bladder, etc. A. Ernest Gallant, M.D., New York. From the *American Journal of Surgery*, June, 1911.

Preventable Blindness. By W. Cheatham, Louisville. Reprint from the *Kentucky Medical Journal*, July 1, 1911.

The Training School, published by The Training School at Vineland, N. J. with an interesting table of contents for December.

Ueber die Akustischen Besonderheiten der Herztöne, ein Neuer Herzkontrollapparat, von Dr. Lilienstein in Bad Nauheim. Sonderdruck aus der Münchener Medizinischen Wochenschrift.

One Hundred and Fourteenth Annual Report of the Maryland Hospital for the Insane.

Carcinoma of the Right Fallopian Tube Readily Palpable Through the Abdomen. By Thomas S. Cullen, M. B., Associate Professor of Gynecology, Johns Hopkins University.

The Early Diagnosis of Cancer of the Uterus; Operative Technic. By the same author. From *International Clinics*.

A Large Cystic Tumor Developing from the Iliopsoas Bursa, Containing Large Free Cartilaginous Masses and Communicating with the Hip-joint. By the same author.

A Pseudohermaphrodite. By the same author. From *Surgery, Gynecology and Obstetrics*.

Surgical Diseases of the Umbilicus. By the same author. From *The Journal of the American Medical Association*.

A Malignant Intestinal Growth Requiring the Removal of an Unusual Number of Abdominal Structures. By the same author.

An Extra-Abdominal Multilocular Ovarian Cyst. By the same author.

PUBLISHER'S DEPARTMENT.

"What has your boy learned at school this season?" "He has learned that he'll have to be vaccinated, that his eyes aren't really mates, and that his method of breathing is entirely obsolete."—*Selected.*

THE METAL TRADES COUNCIL, according to the Dominion Medical Monthly, having found that the children's teeth of the Toronto public schools, are in a deplorable condition of neglect and decay, have resolved, that the preservation of the teeth is essential to good health and good health essential to the enjoyment of life and that money spent upon the conservation of public health is well invested, the prevention of disease being much cheaper than its cure, and the maintenance of a higher standard of industrial efficiency more economical than permitting physical deterioration, to say little about the human side of this matter; and that they place themselves on record as favoring free medical treatment as well as free medical inspection of school children, and that, as a step in this direction, it calls upon the Board of Education to establish free dental clinics in connection with the public schools, the children's teeth to be periodically examined and repaired, absolutely free of charge; this service to be rendered to all alike, without any taint of charity; and they approve the expenditure of any sum of money necessary for this purpose.

We wish this generous organization with other people's money would similarly resolve regarding our electric and gas lighting plant, plumbing, building etc., for our new home. They would then be only imitating our noble non-mercenary profession that serves hospitals, etc., free so often that poverty stalks among the doctors.

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KLEPTOMANIA AND PYROMANIA.

BY JAS. G. KIERMAN, M. D.,

CHICAGO.

Fellow Chicago Academy of Medicine, Foreign Associate Member French Medico-Psychological Association; Honorary Member Chicago Neurologic Society, Honorary President Section of Nervous and Mental Disease Pan-American Congress 1893, Chairman Section on Nervous and Mental Diseases American Medical Association 1894; Professor Neurology Chicago Post-Graduate School 1903; Professor of Nervous and Mental Diseases Milwaukee Medical College 1894-5; Professor of Nervous and Mental Diseases Illinois Medical College 1905; Professor of Forensic Psychiatry Kent-Chicago College of Law.

ABOUT 60 years ago Griesinger pointed out¹ that in many cases of what were then called "manias" (but which today would be called obsessions or imperative conceptions or periodic psychoses) there were psychic elements other than the simple impulse. The determining elements, according to Griesinger, were more often the constitution in which it occurs. The pendulum seems to be swinging back to the point of view Griesinger then combatted since one of the most fervid of the Freud school, Stekel,² very emphatically expresses the opinion that kleptomania is an expression of eroticism in the sex trauma sense of Freud. That an erotic-emotional element may underlie stealing was shown by Lacassagne about sixteen years

1 Mental Pathology and Therapeutics, Sydenhan Society Edition.

2 Jour. of Amer. Instit. of Criminology, 1911.

ago. The chief object of certain women in stealing is to secure the voluptuous titillation that fright and worry over detection gives³ them. In a case reported by Janet,⁴ the woman, although depressed later, stole to secure the voluptuous emotional exaltation she experienced. In a case elsewhere cited⁵ a girl (who stole a physician's buggy to enjoy the titillation of being a thief) found the chase, "delicious, beautiful, wonderful. The blood tingled in the veins." She was "wild, intoxicated with pleasure." Stealing, as Griesinger, and others have pointed out, therefore, is not necessarily kleptomania even when seemingly absurd. It must be admitted also that while true kleptomaniacs steal from an imperative impulse so to do determining psychologic and physiologic factors exist. Even the most seemingly absurd thefts often have secret determining causes, whose nature the thief fully recognizes. These "criminals on occasion" merit, as Lacassagne states, the benefit of extenuating circumstances, for often there is no premeditation, but merely the absence of conflict with strong desire, which however is not a morbid impulse. The majority of cases of both kleptomania and these thievings, occur in the department stores. Women often steal there and there only. "Bargain" sales are hence determining factors of theft. The display fascinates the customer, provokes desire and causes an intellectual conflict which often in the strongest woman leads at best to prodigal expenditure. Self-contained, economical housekeepers often succumb to temptation to waste more money than they dreamed of spending when starting out. If such be the influence on sound women what must be the effect on pregnant, climacteric and menstruating women, hysterics, neurasthenics, morphinusers, alcoholics, invalids, senilities and other persons whose mental stability is not on a level with their social status. These "bargain" sale thieves are often no more insane than other thieves, but they have much less power of resisting temptation. Brouadel reports the case of a judge's wife, who, while pregnant, stole a roast goose from a store restaurant. Legrand du Saulle has observed another judge's wife who, in a similar state, stole 300 neckties. Lacassagne examined a pregnant woman of the

³ Jour. de Med. de Paris, Oct. 25, 1896.

⁴ Jour. de Psychiatrie, January 1911.

⁵ Alienist and Neurologist, May 1903.

upper middle class who had stolen by dozens, pocketbooks, knives, scissors, etc., which she hid away, without using, in a garret.

Kleptomaniacs are a vivid feature of Zola's "Ladies' Paradise." Pure thieves use a pregnant woman as a shield. Three women, one pregnant, enter a crowded aisle of the "Ladies' Paradise." While the inspector is watching the pregnant woman, whom he suspects of the kleptomaniac propensities of her state, her companions steal and escape with impunity when the alarm is given, leading the pregnant one to bear the burden and plead her state.

Popular opinion of the irresponsibility of pregnant women is of long standing. Harriet C. B. Alexander,⁶ before the American Medical Association 25 years ago, pointed out that as Ben. Jonson's plays demonstrate, English-speaking popular opinion early regarded the pregnant woman as irresponsible for her "longings." A most natural and just view, since on careful analysis of the mental condition of pregnancy, it is apparent that this is always affected by more or less morbid perturbations of the monarchic cerebral vaso-motor center, secondary to pelvic fluxionary changes, to irritative conditions, to exhaustional conditions and to pressure neuroses of cardiac, pulmonary, gastric, visceral, or peripheral neuric origins. The various "longings" of pregnancy arise from imperative obsessions, either pure or dependent on perverted sensations, or from reversions to early habits of the race during reproduction. Legally, these mental states predispose to kleptomania, either pure or resulting from a desire for possession dominating a weak will.

In many menstruating, most neurasthenic, all alcoholic, opiophagistic, hysteric, climacteric and senile women, the will is also weakened so that they fall ready victims to obsessions and morbid impulses.

Kleptomania appears in all great cities. London police and "go-betweens" have lists of kleptomaniacs. The "go-between" lists contain about eight hundred women in easy circumstances, but very few men, a dozen at most. When a shopkeeper loses merchandise, he ascertains which of his klep-

6 Jour. Amer. Med. Assoc., Vol. IX, 1887.

tomaniac customers has visited him. He then asks the relatives by a cautiously worded circular letter, to pay for the lost article. Often the kleptomaniac has stolen nothing, but of this she is not certain and can not affirm her innocence. The relatives pay to prevent scandal. As a dozen families may pay for the same lost article, the shopkeeper profits by the theft.

The procedure adopted in Paris is different. The offender is not stopped in the shop, since it would be easy to drop the stolen object or to say that she was going to pay for it. An inspector, plainly dressed, follows her to the street and quietly but firmly invites her either to go to the police or to return to a special room of the shop to be searched. French shopkeepers are of the opinion that there are more kleptomaniaes than true thieves. They content themselves, as a rule, with compelling a restoration of the stolen articles. When an individual is detected they enforce a search of her rooms, which very frequently puts them in possession of the products of previous thefts. In Paris, out of millions of francs thus stolen yearly, but a few thousands are lost. The true thieves sell or pawn the stolen objects; the kleptomaniaes hide them away. In one case Lacassagne found 119 pocket books hidden away. Paris kleptomaniaes are known to come at fixed hours. Some steal very skillfully but with incredible affrontiveness. One who stole bronze figures was detected only through the absurd crowding of her mantelpiece with bronze figures.

Lacassagne divides the "bargain" sale thieves into four types: Pure thieves, "collectors," mental instabilities and the insane. The "collectors" closely approximate ordinary thieves. Men occur much more frequently among them. They are often in easy circumstances or even rich. They steal without need and almost the same things for the pleasure of possessing them. Bibliomaniacs and other faddists can not leave a bookshop or other collection without buying. These "collectors" have the same pleasure in stealing desired objects. These people may be feeble-minded and insane, but, as a rule, merit the severity of law as much for their own sake as that of society.

The mentally unstable are those in whom the desire to take, quickly occurs and who yield without conflict. They are usually rich or in very easy circumstances. Their will

weakens rapidly in the seductive surroundings of the "bargain" sale and yields readily to a motive more or less bizarre, but determining and obvious, such as vanity or coquettishness, even good sentiments. Others are seized by a vertiginous state caused by the noise and the crowd and become victims of morbid impulse. After several yieldings to temptation they become inveterate thieves, can not master their impulse systematically, weekly even, they return to steal, in order to experience the same fright and intense distress in which they have a morbid delight. The desire becomes irresistible. On analyzing it, horrified at themselves, they experience the need of confession to a friend. Despite the most bizarre precautions against their penchant they succumb. In some cases suicide then suggests itself. In other cases the tendency is checked by legal procedures to which they voluntarily give themselves up.

To settle, even from the standpoint of the patient's welfare itself, the question of punishability is therefore not easy. One woman who bought forty dollars worth at a department store stole a sponge worth twelve cents. Another woman bought twelve dollars worth and stole a three cent pocket book for her cook. For this, she, a woman in easy circumstances gave the following inventively stupid excuse: "I have stolen," said she, "because having bought so many things I thought this small return due me." The insane are obviously irresponsible. Their thefts, as a rule, present characteristic, naiveté, puerility or morbidity.

Lacassagne, like Benjamin Franklin,⁷ thinks the "bargain" store a serious social danger to the body politic. Women who never have stolen and who would never steal elsewhere find themselves bewitched, excited and take a true diabolic possession. In the midst of a hurrying crowd in the odorous, over-heated wealth suggestive atmosphere, the woman finds herself with clothing aptly adapted to hide stolen objects. At certain hours there are too few employes to serve the enormous crowd which waits its turn, touching and taking goods whose splendor and variety bewilder. Certainty of detection would undoubtedly serve as deterrent in many cases, as Lacassagne remarks, it would be better, especially for the mentally un-

7 Essay, Poor Richard's Almanac.

stable women, to catch the thief rather than merely to prevent theft.

The "collector" type is as a rule perfectly responsible. "Book snatching" is a besetting vice of bibliomaniacs just as coin and stamp purloining attacks numismatists and philatelists.

While kleptomania in the United States is legally a defense for crime it remains to be determined in each case whether kleptomania exists and whether it merely extenuates or completely absolves. Where states predisposing to mental instability exist the burden of proof of sanity is on the state. In the "collectors" the burden would be on the accused. Stealing of relatively worthless articles is by itself no evidence of insanity. Parisians think it "smart" to steal sugar and matches from restaurants. Not a few sane Americans think it is equally "smart" to steal rides on railroads.

Deterrent influences must be carefully adjusted to each case since as Lacassagne shows, the chief object of certain women in stealing, is to secure the voluptuous titillation, that worry and fright over detection gives them. On the other hand certain kleptomaniacs must be held responsible if they persist in visiting "bargain" stores when they have learned the danger of these to their mental stability.

There is no need for new legal principles in these cases. The common law properly interpreted in English-speaking states is amply sufficient to protect the rights of the accused and the community.

The mental state of the "collector" frequently in secondary and senile demented, is one of the phases of mentality found in misers. Here the collectivism may coexist with seemingly great intellectual power. The instances cited by Merriwether⁸ where misers were charitable and public spirited fully illustrate this. One phase of this mentality is the "money maker on principle" who accumulates merely for the titillation of accumulating.

Prominent among the "collectors" are the "book snatchers."⁹ There are three sorts of these.¹⁰ First, the thieves

⁸ *Lives of Misers.*

⁹ Besaut: "Harp and Crown."

¹⁰ N. Y. Sun, Aug. 10, 1911.

who have a liking for attractive covers and walk away with a pretty book without any reference to its value. They are pilferers rather than real book thieves. Another and smaller class of book thieves is made up of men and women who know books and love them. They would like to have a fine library and covet every rare book that they see. Time and again they come to look at some fine book until their desire gets the better of them and they steal the volume, not to sell it, but only to keep it in their homes. Such thieves sometimes return the books they have taken. In the third class are the professional thieves. They have no sentimental attachment for books. They know their value and may have been employed in book stores at some time. Stealing with them is a business.

In the winter a heavy overcoat with a slit in the lining is used by them to secrete books. Another plan is to have a specially made satchel. It looks like an ordinary traveling bag from the outside. The difference is that the bottom opens by two sliding leaves, which are controlled by a strong string. The thief puts his valise over the book he wishes to steal and when the dealer's eye is turned away presses the string. The leaves at the bottom close up and the book is safely inside the bag.

Others carry packages and slide the books they want under them. Sometimes book thieves will make several visits to a store before they steal anything. At each visit they hide a valuable book in some unaccustomed place, among cheaper volumes. On the last day a round of the hiding places is made. The dealer sees them stopping at the shelves where his inexpensive books are kept, and even if he is a little suspicious he does not watch very carefully, for he thinks that none of the books are worth the risk of stealing. Only after they have gone does he find out what has happened.

There are some known book thieves in New York, men who have served prison sentences for their crimes, and there are some others who are merely suspects. The dealers know them, and when they enter a book store special vigilance is exercised.

"But some of them are so slick that they can steal a book under the eyes of the attendants," said the manager of one store.

"We had a man under observation once and hardly had he got out of doors when we missed a valuable book. A man ran after him and got him at the next corner. A policeman was called and the suspect searched, but nothing was found on him. He had been seen talking with another man a minute before he was arrested and the attendants were positive that the book was in its place when the man entered the show room. But what could we do? There was no legal evidence."

A New York dealer was passing through his shop one day not long ago when he noticed that one of the visitors, apparently deeply engrossed in a book, had the volume upside down. This was enough. A call was sent for a policeman and the man arrested on suspicion when he left the store. Sure enough, he had several books in his pockets that he hadn't paid for.

"A real reader is always deeply interested in his book," said the dealer, telling about the happening, "and when I learned my business I found out that a man who is always looking up from his book or has it in such a position that he cannot easily read it is thinking of something else, probably of how to do the dealer. Anyway, he will bear watching."

It is not easy to dispose of a valuable book and this fact works as a protection for dealers. There are only a few places where rare books can be sold at anything near their value, and the dealer who has offered to him a fine volume will make pretty close inquiries of the seller as to where he got it.

A few months ago a young man entered a book store with several good books, one of them a presentation copy of Longfellow's "Evangeline." He was asked to come again, and when he did he found two detectives and the man he had stolen the books from waiting for him.

Sometimes it is a small thing that betrays the book thief. A young English fellow offered a fine copy of "Pickwick Papers," a first edition, to a dealer not long ago.

"It came from father's library," he told the proprietor. "I had some trouble with him at home and when I came to this country I brought with me the book that I thought most of. It was this copy of 'Pickwick Papers.' I hate to part with it"—here he dropped a tear—"but I must live and New York is an

awfully hard place. I am going to write home for money and then, maybe, I can buy my book back if you haven't sold it."

He was told to leave the book and come back in a day or so. The dealer looked over the book. It was in perfect condition, a remarkably fine specimen of a rare edition; there was not a tear or a soil in it.

"Is it possible," the dealer asked himself, "for a young fellow who brings his favorite book from Engalnd, the book he liked best in his father's library, to keep it in such spotless condition?" He felt that it wasn't likely and started a search. He found that the book had been stolen. A detective hung around a day or so, waiting for the Englishman to come back. But he never did.

"When a dealer first starts out for himself he has to watch for thieves," said a New York dealer.

"When I started in the business and had little money the thieves used to get about every valuable book I had, and I spent my time going around buying my own books back again. Of course, they sold the books for little--a first edition Walton's 'Angler,' worth \$200, went once for \$10—and the dealers kindly let me have them back again at what they paid.

"Now I do not have so much trouble, but every little while a valuable book will be stolen. Then I send out a circular letter to other dealers, with the result that the book thief is usually caught. I don't know what people want to steal books for, anyway, it is so hard to dispose of them safely."

Don Vincente of Barcelona was, no doubt, the most remarkable book-thief of all times. He was originally a friar, but set up as a dealer in rare books in Barcelona about the year 1834. He loved his stock in trade so much that only want tempted him to sell a book. Once at an auction he was outbid for a copy of the *Ordinacions per los Gloriosos Reis de Arago*,—a great rarity, perhaps a unique. Three days later the house of the successful rival was burned to the ground, and his blackened body, pipe in hand, was found in the ruins. He had set the house on fire with his pipe,—was the general verdict. A mysterious succession of murders followed. One bibliophile after another was found in the streets or the river, with a

dagger in his heart. The shop of Don Vincente was searched. The *Ordinacions* was found there. How had the copy escaped the flames? Then the Don confessed not only that murder but others. Most of his victims were customers who had purchased from him books he could not bear to part with. At the trial, counsel for the defence tried to discredit the confession, and when it was objected that the *Ordinacions* was a unique copy, they proved there was another in the Louvre, that, therefore, there might be still more, and that the defendant's might have been honestly procured. At this, Don Vincente, hitherto indifferent and silent, uttered a low cry. "Aha!" said the al-cald," you are beginning to realize the enormity of your offence." "Yes," sobbed the penitent thief, "the copy was not unique, after all."

According to Stekel¹¹ real kleptomaniacs are not fetichists, but neuropaths who out of ungratified sexuality perform symbolic (forbidden) actions. A handsome woman of about forty-five was to take her four daughters to a ball. Just before leaving the house an incident excited her very much. Her husband laid his cigar on her petticoat. A hole was burnt in it, the thin material flamed. She was very angry with him. At the ball, about midnight, a lady accused her of having stolen a valuable lace scarf. She declared she had found it, but several witnesses disputed the fact. The matter was pleasantly settled. Following this she was attacked by melancholia, during which one reproach was obstinately uppermost. As she expressed it "I reproach myself that I did not give my 'little one' earlier." This apparently referred to when four years before, her youngest daughter might have married a very rich man, but she had refused consent on the ground that the child was too young. So far all was seemingly logical, but underlying it was an entirely different factor which psycho-analysis brought to light. Daughter, that is, "little one," is a common symbol for vagina. Thus she reproached herself that she had not given away earlier, that she had resisted all temptation. Her husband then sexually impotent had been so for ten years. Always passionate and amorous, she did not lack admirers, but merely courage.

11 Jour. Amer. Instit. of Criminal Law, etc. July, 1911.

She was very pious and regarded marriage as a sacred institution. The day on which she stole she was sexually excited, as always was the case during menstruation. The burning cigar that burnt a hole in her skirt reminded her of the time when her husband was still young and fiery. She set herself firmly against psycho-analysis. Stekel asked her to utter a number of words just as they came into her mind. Among the words were: "cigar, candle, bootjack, electric railway, stein, lamp, flower, box, violin, artist." She was then asked to form a sentence from each of these words. The sentences, the interpretation or significance of which is added to each, were as follows: "The cigar has gone out" (sexual impotence of her husband). "The candle is burnt out" (the same). "A bootjack is a horrid instrument" (her husband used a bootjack). "I like to go on the electric railway; on the electric railway two cars are coupled together." "Criminals are sent to Stein" (a prison in the vicinity of Vienna). "The lamp is still burning" (lamp: vagina). "I like to pick flowers." "No one looks at an old frump (box): [The German word *Schachtel* (box) is also used to denote an old, unattractive woman.] "I like to hear the violin." "He must be an artist." Her last admirer had been an artist on the violin. A flirtation had gone on between them, but she had not overstepped the bounds of propriety. Another symptom appeared in her melancholia. She thought that she was impoverished and became very saving. She constantly expressed a desire to begin a "new business" to earn money. This desire also had a sexual significance. She wanted to earn money with her beauty. It was a typical "prostitute's" dream, often found in women neuropaths. Thus all her symptoms were explicable by the subterranean, suppressed currents of life. The theft was the symbolic representation of a sin in which she could yet retain her sexual purity. Knowledge of sexual symbolism, according to Stekel, is the key to kleptomania, perhaps to all 'monomanias.' Didier¹² tells of a boy who up to fifteen was good and industrious. Then he suddenly became lazy, apathetic and incapable of study. The boy committed several thefts. Once before in his fourth year, he broke open his principal's closet. Hypnotherapy

12 *Kleptomania and Hypnotherapie.*

effected a complete cure. Didier traces kleptomania to hysteria as a foundation. Breaking open the closet represented symbolically a defloration. A 26 year old unmarried woman stole pencils. She was an incapable person of wandering and inattentive mind. The excuse she gave was that her father kept her so strictly. This girl was symbolically in search of a phallus (pencil). In most persons suffering from kleptomania, as in all neuropaths, strong homo-sexual tendencies are found. This is peculiarly evident in the case of Chlumsky.¹³ A servant who suffered from excitability during menstruation shared a bedroom with her mistress. She asked to be allowed to sleep alone in the hall, saying that the room was much too hot for her. During excited dreams she twice fell out of bed. She stole a small music-box out of her mistress's closet and played with it (clearly homo-sexual desire to play with the genital parts of her mistress.) Her skirts, jackets and blouses she laid in an unused bed of her mistress's. She was very forgetful, wandering and dreamy. One night she drew the key from under her mistress's pillow and opened a drawer. She broke in a window pane and declared that two men had been there and tried to choke her. Not long before a case had been reported in Viennese papers of a rich woman arrested for stealing sheets from a public bath. She was caught just as she was trying to hide a sheet in her bloomers. Other stolen sheets were found in her house, all of which had patches where the marking had been cut out. The place and manner of concealment clearly betrayed the sexual aetiology of this 'monomania.' All these cases are women sexually excited and ungratified, who lack either courage or opportunity for gratification.

All cases of stealing in childhood known to Dr. Stekel were children whose sexual instincts had awakened early and whose desires had been directed towards forbidden things. In the earliest years a child's sexual excitement is expressed by sudden attacks of shame, blushing, stuttering, pavor nocturnus, various feelings of fear, vomiting, diarrhoea, sucking, blinking, making faces, wetting the bed, fits of anger, sleeplessness, irritability and unrest which may easily betray itself

13 Diebstahl bei Erworbenen Schwachsinn.

by slight twitchings akin to those of St. Vitus dance. Older children, about puberty, grow noticeably inattentive and incapable of mental concentration; they mope, and their work in school is not up to what it was formerly. They seek to be alone, grow shy and blush easily. At this stage they are often moved to symbolic actions that are interpreted as indicating bad traits of character. Many a boy expelled from school for theft, acted from unconscious, purely sexual motives, later became an irreproachable character. Such harsh treatment has driven some boys into crime. Many children in whom the inclination to steal has been observed, grow up to be men and women distinguished by a painful sense of honor. Thus some virtues have their origin only in the over-compensation of a suppressed vicious impulse. Most of these cases of thieving in children show unconscious sexual symbolism.

A painter of high mental and moral caliber came to Stekel for treatment. Three times he had stolen. As a boy, he stole a gold watch from a servant sold it and squandered the money in a day. Psycho-analysis showed that the boy had been foolishly brought up. For years he had had the opportunity of observing not only normal coitus between his parents, but also perverse sexuality, such as cunnilinctus. One evening he saw his father kiss the parlor maid. He was then twelve years old and passionately addicted to masturbation. Having discovered the intimacy, it did not escape him that his father sought every opportunity of being alone with the exceedingly pretty girl. On an evening when the two had locked themselves in his father's room, he ransacked the girl's trunk, found the watch and hurried away with it. This action had several motives. He was angry and jealous of the girl, hence he took her watch,—which again was only a symbol of her genital parts. (The watch symbol is found with uncommon frequency in dreams; apparently because of its circular form and because it is put in the pocket.) The girl was in despair when she discovered the theft. At the sight of her grief he felt remorse and at the same time a sort of sadistic pleasure arising from his ability to make her feel his power and to cause her pain. As a grown man, he visited a married friend whose wife attracted him greatly. When he was leaving, he saw a

conch-shell lying in the hall. He snatched it up and hurried off with it. At home he looked at it for hours, examined it all over, and then gave it to a little girl in the street. (The shell had the same symbolic significance as the watch, and the case that he afterwards stole.) Under similar circumstances he took a pair of opera glasses to which he was especially attracted by the case. The woman who owned them, whose husband was his pupil, had such lovely "peepers."¹⁴

In another kleptomania under Stekel's observation the subject became a high-minded, philanthropic man. As a child, he repeatedly stole trifles: a piece of soap with a beautiful picture of a woman on the wrapper, a glove from a lady who was visiting his mother, money out of his father's pocket that he gave to a boy; books from his sister's bookcase, that he sold; a roll from a baker, that he gave to a beggar. These thefts took place between the sixth and tenth year. There followed a period of great piety. He repented of his sins and resolved to be a good and noble man, in which he has succeeded, with the exception of several erotic missteps. Only once he experienced a serious relapse. At that time he had fallen much in love with a servant. His experiences, however, had made him cautious and he did not dare to follow his instincts. He had also sworn a sacred oath to his wife never to be unfaithful to her again. He arranged to meet the girl Sunday afternoon and take a short trip with her. He fought with himself and, finally deciding to go to his wife in the country, he immediately went to the railway station. No one was at the ticket window. A cheap little bag lay on the shelf in front of it. He was seized with an impulse, took the bag and stuffed it into his pocket. Then he hurried into the lavatory, where he emptied the contents into his purse. From a scrap of paper in it he concluded that the owner was a servant. The bag he threw into the water-closet. Then he went into the waiting room in a dazed condition. There he saw a servant hunting everywhere, aided by a policeman. It left him entirely unaffected. The next day he regretted his action, felt that he had sunk very low and wanted to repair the damage. He advertised

in several papers, but was not able to find the girl. This experience was succeeded by deep depression.

These examples show, according to Stekel, the tremendous importance of sexual instinct in the origin of kleptomania. Similar examples might be given relating to pyromania, the impulse to set fire to something, and hydromania, the pleasure of playing with water.

Like most of the Freudists, Stekel is untrained in psychiatry. The employment of the popular notion conveyed in his use of the term "monomania" in the old exploded sense of a unilateral insanity shows this. Furthermore his identification of physiologic depression with pathologic shown in his employment of melancholia do designate a state secondary to reproaches, not necessarily morbid, arising from an ungratified appetite indicates that, despite his psycho-analysis, analytic power is absent. Binet, Kraft-Ebing, Moll, Chevallier, Penta, Havelock Ellis, Block and the other sexual psychologists could not but regard from his own definition his kleptomania as a fetishism or sexual symbolism and not a true kleptomania; an imperative irresistible impulse to steal. Undoubtedly, as already pointed out, sexual symbolism may express itself in stealing. Such stealing however is not kleptomania nor necessarily even morbid since the subject has an object in stealing whose nature is fully recognized while the propensity is fully controllable. The question, moreover, logically arises whether both the words elicited in psycho-analysis and their erotic-symbolic sense are not suggested by the psycho-analysts. There are no attempts made at control procedures and leading questions are potent sources of ideas to neuropaths.

(TO BE CONTINUED.)

THE PRESENT STATUS OF THE BINET-SIMON GRADED TESTS OF INTELLIGENCE.¹

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THE Binet-Simon graded tests of intellectual development, or similar amplified and standardized tests, give promise of making so large a contribution to the methodological technique indispensable in the scientific study of all sorts of deviating and defective individuals, that too much time cannot be devoted to the critical examination of the tests, in order to determine the accuracy and relevancy of the scale. It is no less necessary in psychological than in medical or biological investigations to rigorously adhere to the accepted rule in the physical sciences, that before making any measurements whatever it is necessary to determine whether the instruments of research are accurate, and if not what the amount of the inaccuracy is.

There are at least four methods available by means of which we may test the accuracy of measuring scales of intellectual capacity.

First, we may test large masses of supposedly normal children, and determine the percentage of passing for each test in each age norm or for each collective age norm. At the present time we have the returns from a number of scattered surveys made by the B.-S. method in France (Binet and Simon), Belgium (Decroly and Degand), England (Katherine Johnstone), America (Goddard) and Germany (Bobertag). These studies represent much painstaking work, and are valuable contribu-

¹ Read before the American Psychological Association, at the Washington meeting, December 27, 1911.

tions. But they are more or less unsatisfactory for various reasons. The number of children tested in each age, at least in some ages, has been rather limited. In the absence of any definite criterion by which to select a normal or typical or average child, the children tested have been largely selected at random. And the testing has usually been of the narrow-range type. By a narrow-range type of testing I refer to surveys which are limited to the child's chronological age and one or two higher and lower ages. Such limited surveys made on a small number of children are practically worthless either for the purpose of arriving at an adequate clinical picture of the child's mental condition, or for determining his mental station or psychosis, or for the purpose of trying out the accuracy of the scale, because from all that we know about human nature from a number of psychological and pedagogical investigations, mental traits, whether original or acquired, differ very considerably in children of the same chronological ages or of the same school classification. The defectiveness of restricted testing has been forcibly brought home to me from my own wide-range testing of a colony of epileptics, and from a less extensive testing of certain types of insane patients. From the wide-range method of testing epileptics with the B.-S. scale it appeared that dozens of those who were only able to pass one of the lower age-standards passed one or more tests in a half dozen higher ages, and several of those who failed on the age standards between six and nine passed age ten. It is necessary to remember in the later discussion that the surveys made on public school children have usually, perhaps nearly always, followed the narrow-range method of testing (the writers have given little information on this point.)

It is important to emphasize also that a try-out of the tests to prove thoroughly satisfactory must be based on fairly normal or typical children, and not on mixed groups of normal, subnormal and supernormal children. Even among normal children, so-called, we will always find a considerable amount of variation in the strength of any trait or capacity; but if we include both dull and bright children the variation becomes so large that the survey can scarcely be used for the purpose of testing the reliability of the scale. It may be frankly con-

ceded that we have no fixed standard of what constitutes the normal child in any age, but we are in a position to use a fairly satisfactory criterion by which to select average children, namely the degree of pedagogical arrest or progress which the child has shown in his school work and the number of physical defects found by the medical inspector.²

A second method by which to test the accuracy of scales of mental development, is to test the same groups of normal children annually. If the scale is measurably correct the children should gain approximately one mental age with the passing of each calendar year. No studies of this sort, on normal children so far as I am aware, have been made by the B.-S. scale.

A third method is to classify by mental ages all the members of homogeneous groups of individuals, such as entire colonies of epileptics or entire institutions for the feeble-minded or the insane. The curves of distribution or surfaces of frequency from such surveys should, from the theory governing distributions controlled by chance factors, assume the normal, bell-shaped appearance. In a homogeneous group the mental stations of the individuals should cluster around one mode. From this mode negative and positive departures would occur. The frequency of the departures would depend upon their size; the larger the departure the smaller the frequency. The curve, accordingly, will taper off in the form of a bell; and if any marked skews occur it is evident that the group in question is not a typical group—the group is, so to say, a loaded group because, certain factors having received undue emphasis in its selection, the law applying to chance distributions does not hold—or the size of the group is too small to furnish reliable data, or there are inequalities or irregularities in the measuring scale or in the method of testing, or the group is so peculiar or anomalous as not to be in accordance with Gauss' curve. Two B.-S. curves of distribution have been constructed for homogeneous groups of individuals, and are available for this study.

A fourth method of evaluation is to plot efficiency or capacity curves for each separate trait in all the mental ages

² See *The New Clinical Psychology and the Psycho-Clinicist*, *The Journal of Educational Psychology*, 1911, p. 204.

in which the given trait has been tested. If the individuals of a given group, whether normal or abnormal, have been classified with approximate accuracy by the scale, then we should expect a gradual rise in the efficiency or capacity curve with each higher mental age, or at least with every second or third higher age. Thus the children classifying as of six years of age ought to be able to repeat more detached words in three minutes than the children grading five, and the seven-year olds more than the six-year olds, etc. Moreover, instead of testing the relevancy of the scale by plotting yearly efficiency curves for the traits which are tested in the scale itself, we may employ extraneous tests. Thus if the children have been properly classified by the scale we should expect those who grade eight mentally to replace the blocks in a form board more rapidly than those who grade six or seven, and so on. This would not hold true, of course, for every individual, but it should hold for masses of individuals. The gradual increase of efficiency or capacity may be expected to continue up to the point where the trait in question reaches its maturity or maximal development. This will be followed by a period of stationary efficiency which will continue to the beginning of the period of decline or of involution changes.

In the case of curves which are based on abnormal persons, such as epileptics, the feeble-minded and the insane, the validity of this method of testing the accuracy of the scales may be questioned. But it seems reasonable to suppose, and the supposition is in accordance with such evidence as we have, that if, say, 50 epileptics grade 8 mentally, 50 grade 9 and 50 grade 10, the average efficiency of a given trait will be less for the 8, than the 9-year group, and less for the 9, than the 10-year group. Hence the legitimacy of the method can scarcely be questioned so far as concerns the testing of the reliability of the scale for classifying the individuals of a given homogeneous group. Moreover, if we grant the contention that the individuals of the human race (the idiots possibly excepted) are not classifiable into disparate groups or classes, separated by distinct gaps, but that they differ merely in degree—quantitatively, not qualitatively—so that all can be ranged on a common surface of frequency in respect to any trait or combination of traits which

may be tested, then we may assume that the strength of different mental traits in a group of abnormal individuals who classify, say, as nine mentally, should be approximately the same as in a group of normal persons who classify as nine. This would probably not hold for every possible trait, but surely for the average of the various traits tested in the same age. It has been necessary thus to advert to these premises because no yearly growth curves for individual traits have thus far been plotted with a view to testing the relevancy of the scale, save those to which reference will be made in this paper.

What, now, do the results of the surveys made by various workers indicate with respect to the correctness of the B.-S. scale? The time at our disposal makes it necessary to limit the discussion to a very brief recapitulation of a more extended monographic treatment which will appear elsewhere.³ We shall take up first of all the curves of distribution.

In my plotting of a curve of distribution for a homogeneous group of mentally impaired persons (epileptics), two obvious skews attracted the eye, a minor one at five and a major one at nine. The drop in the frequency at five is negligible, for reasons that cannot be entered into here, but the drop at nine clearly appeared to be abnormal. Only 8.4% of the epileptics were able to satisfy the 9-year standard while 24.9% passed the ten-year norm. A minute analysis of the data indicated that the irregularity at nine could be traced to four causal factors: the wide-range method of testing, the method of scoring, inherent inequalities or anomalies in the mental make-up of epileptics, and inherent inequalities or defects in the B.-S. scale itself. Of these factors the last two were far and away the most important.

The above skews in the curve furnished presumptive evidence that the scale was not maximally correct. This presumption was abundantly confirmed by a further analysis of the data, which showed that several age standards were entirely too difficult, more particularly ages six and nine. It was discovered, for example, that none of those who are classified as of age six were able to qualify on this age-norm (all

3 *Experimental Studies of Mental Defectives: A Critique of the Binet-Simon Tests, and a Contribution to the Psychology of Epilepsy*, Warwick and York, Inc., 1912.

the tests but one); they all made the six years standard on the basis of advance credits. Only 29% of those who grade six, seven, eight, nine and ten passed the six year standard. Similarly only 10% of the B.-S. 9-year olds, and only 40% of all those grading from nine to thirteen, passed the nine year standard. These results for epileptics, taken by themselves, would be suggestive although possibly not convincing. But, unfortunately, similar inequalities in the age standards appear in the published data based on the testing of public school children. In Katherine Johnstone's testing of public school girls in England (Sheffield) 24 out of 30 9-year olds failed on the 9-year norms; and in Goddard's testing of school children in our own country the number of 6-year olds who were able to satisfy the 7-year norms was larger than the number who passed age 6, a larger number of 8-year olds stayed in age 7 than made age 8, more 9-year olds were able to pass the 10 than the 9-year norm, an unusually large number of 10-year olds qualified on the standard for this age while a much smaller percentage of 11-year olds could pass the standard of that age, and more 12-year olds classified as 10 than as 12.

These relative disproportions in the collective difficulty of the different age norms are, of course, ultimately dependent on inequalities or misplacements of the individual tests which make up a given age-norm. When the results are critically examined it is found, as a matter of fact, that there is an amazing lack of uniformity between the different tests of the same age. The extent of this inequality may be expressed in quantitative terms by the average mean variations between the percentages of successes for all the tests of the same ages. No mean variations have been computed except for a colony of epileptics. For the epileptics the M. V's amount to over .20 in four ages (I-II, III, VII, IX), and less than .14 in six ages (V, VI, VIII, X, XI, XII), while the average for the thirteen ages amounts to .17.

Similarly the differences between the easiest and most difficult tests in the same ages, based on the performances of the epileptics who classify in the given ages, amount to as much as 62% in age six, 57% in age 12 and 56% in age nine; while, correspondingly, the smallest ranges are 11, 21 and 24%

for ages 4, 8 and 1, respectively. It is thus evident that most of the age norms contain tests varying conspicuously in difficulty. Some are too difficult, some too easy and others about right.

Here, again, the findings among epileptics are paralleled in the results of the public school testing. Limitations of time render it quite impossible to indicate the status of all the tests in the scale. I shall therefore only have time to mention some of the tests which most obviously appeared in my own testing to be misplaced, and which likewise proved to be improperly placed when judged by the testing of ordinary public school children.

Among the tests which have proved to be too difficult for the age to which they have been assigned are the following:

Age V, rearranging triangles. Age VI, repeating 16 syllables. Age VIII, copying a dictated phrase. Age IX, giving correct change, classificatory or descriptive definition, six memories, and arranging five or six weights. Age XII, repeating 26 syllables. Age XIII, all tests.

The following tests, on the other hand, have proved to be too easy for the age to which they have been assigned. Age VII, counting 13 pennies. Age VIII, naming four colors. Age X, naming money; and age XII, three rhymes.⁴

In the case of a number of tests (including some of the above) the results of different investigators are discrepant. The discrepancies are probably due, in part, to the fact that uniform testing conditions have not always been followed by different workers, and to the fact that there are national differences in the strength of various mental traits. Tests which are too difficult for children of one nationality may not be too difficult for those of another, but just right or quite the reverse.

In considering some tests as too difficult and others as too easy it is obvious that we have posited a norm or *standard of normal variation* for each age norm. We have proceeded on the assumption that age norms do not possess any scientific value unless a certain minimum percentage of so-called normal children pass the norms for their chronological age. It is

⁴ For figures which will substantiate the above conclusions consult the writer's *Experimental Studies of Mental Defectives: a Critique of the Binet-Simon Tests, and a Contribution to the Psychology of Epilepsy*, Warwick and York, Inc., 1912.

evident that if, say, only 25 or 30% of typical or average children pass the individual tests or the collective norms for their age that the norms are worthless. It is equally evident that the requirements are too exacting if the standard of passing were fixed at 100%, since, as already stated, mental traits even in normal children will vary considerably from the mode or central tendency. A certain amount of variation in the capacities of average children of the same age must be regarded as perfectly normal. Mental measurements at their very best, are variables and not fixed constants. Therefore the question, in the final analysis, reduces to this: What shall we regard as the maximal permissible amount of variation in the difficulty of age norms in a measuring scale of intelligence which lays claim to the character of a scientific measure? The extreme limit may be fixed, I believe, at 25%. That is, if 75% of fairly normal children fail to pass the norms set for their age, the latter may be regarded as too difficult. Seventy-five per cent in the case of a chance array represents merely the mid-point between absolute certainty and pure chance. But, certainly, one of the problems for future investigation is the determination of the *normal or maximal amount of variation allowable in normal age norms*—the establishment of *normal norms of variation*.

Now, if we accept the 25% criterion of variation as ^{the} limiting point, it is evident that the B.-S. scale is far from perfect, even altogether aside from the question as to whether the tests themselves are legitimate tests of intelligence or of intellectual development. The mere inequalities in the scale are, in fact, such as to suggest that it must be of slight utility. But this conclusion cannot be justified, I believe. Even with all its imperfections the scale is an extremely simple, easily manipulated, uniform and valuable objective instrument for determining the relative mental station of, or for classifying, homogeneous groups of defective individuals. This can be demonstrated by a set of efficiency curves which I have plotted for each of the following individual traits in epileptics: the time required to name four colors, to replace the blocks in a form board, and to read a given selection; the number of units or memories reproduced from the reading selection, the number

of detached words mentioned in three minutes, the strength of the left and right hand grip, and the ataxiagraphic sway of the body. An examination of these curves clearly shows that there is an improvement from age to age. This improvement is fairly smooth or regular except in the color, dynamometry and ataxiagraphic tests. Such inequalities as appear in the other graphs are probably often due to the small number of subjects tested in certain ages. The strongest indictment of the scale furnished by these curves is supplied by the mean variations. These vary from 15 to 57% for each age, with an average of nearly 30%. While a variation of 10 or 15% is regarded as quite considerable in various psychological measurements, we need to determine by experimental means, as has been said, what should constitute a normal or maximal amount of variation in normal age norms. In any case, the maximal permissible variation would, as suggested, probably not exceed 25%.

We may conclude, then, that this objective measuring scale, however imperfect, enables us to grade and classify defectives far more accurately than can be done by unaided observation. The great serviceability of the scale may be illustrated from one of my recent examinees, a male katatonic dementia praecox case, age 42, a graduate of an agricultural college, now an inmate in one of the Iowa hospitals for the insane. According to the clinical and ward records made annually by the physician in charge, the patient had been gradually dementing for seven or eight years and at the time of my visit was thought to have reached a very low mental level. Certain observations made by the superintendent of the institution, however, had raised the presumption that this patient was in a better state of mental preservation than the records indicated. He was accordingly put through the B.-S. scale. The result was a surprise. All of the 30 highest tests in the scale were successfully passed with the exception of two, one owing to disorientation in time and one owing to a slight impairment of the weight sense. Not only so, the responses were nearly always prompt, decisive and well expressed. Twelve units were reproduced from the reading selection, which he read in 27 sec., the problem questions were answered in from 3

to 30 sec., the words in the three shuffled sentences were correctly arranged in 6, 7 and 30 sec., respectively, and the seven numbers and 26 syllables in age 12 were reproduced instantly. A wrong act committed in anger should be forgiven more quickly than one not committed in anger because "anger is a disease." "Evolution in mathematics occurs in connection with square and cube root and permutation, while revolution is disorder in society leading to war." "Poverty is a state of being without riches, while misery is the absence of correct feelings." "Pride is a state of mind in which we show elation over our possessions or certain attributes of ourselves, while pretension is deceit or false claim."

Here is a patient who had suffered from mental disease for about a dozen years. One hour of B.-S. testing was sufficient to show that he was practically normal intellectually (his obsessions excepted). And yet this fact had not only not been revealed by years of unaided observation by competent observers but unaided observation had been completely misled. The scale, even as at present constituted, has undoubtedly value as a gauge for locating mental station.

Nevertheless, it is essential that we recognize the limitations and present imperfections of the 1908 scale. The scale is not, as some recent newspaper exploiters would have us believe, a wonderful mental X-ray machine which will enable anyone to dissect the mental and moral mechanisms of any normal or abnormal individual, a talisman which will transform any ordinary observer into a psychic wizard. At its best, much less in its present form, it must not be regarded as an infallible measure of mental station. That the scale is not maximally accurate is attested by the fact that Binet himself left us a 1911 revision, which has been adopted, with certain minor changes, by Goddard. I am by no means certain, however, that these revisions mark an advance step, for three reasons.

First, the re-locations of the tests are not always in accordance with the findings of other investigators. Indeed various contradictions and discrepancies have not yet been cleared away in the original scale.

Second, the number of tests in each age should be increased to, say, ten rather than decreased to five, as has been done in the recent revisions. It is absurd to attempt to use the scale to mentally diagnose defective individuals on the basis of a few deviations or abnormalities. Moreover, since individuals of the same age and training differ considerably in different traits, the scale must be so comprehensive that it will survey a maximal number of fundamental functions—so many that we shall be measurably certain of striking a fair average. Several of the tests eliminated in the 1911 revision have given such valuable insight into the mental condition of epileptic and insane defectives that it would be a misfortune to drop them simply because they are “schooly,” or because the capacities tested are influenced by training. Indeed nature and nurture are mutually interacting and reciprocating factors in the developmental process, whence it is idle to attempt to sharply separate tests into those which measure nature's dower and those which measure the contribution made by the environment. The environmental factors begin to influence the individual at the very portal of life, and practically no child of school age in this country succeeds in evading the formal educative influences of the school.

Finally, before any material American revisions are attempted, the 1908 scale must be given more extensive and thorough tryouts on American children by standardized methods than has yet been done. Such tryouts must be based on large masses of school children in each age who are making normal school progress and who suffer only from the ordinary amount of physical handicap. The surveys should follow the wide-range method of testing. Moreover, a standardized procedure for each test should be followed. This has by no means always been done. For example: I have found experimenters who read for the child, the reading selection for ages 8 and 9, instead of requiring the child to do the reading. Some tell the child in advance that he is expected to reproduce what he reads or what is read to him, while others say nothing about this. Some give the tests as group, instead of clinical tests, thereby both changing the conditions and omitting certain tests in each age level which cannot be

given group-wise. Discrepancies in results inevitably arise from such diversities of procedure.⁵

The greatest present obstacle to genuine progress in psycho-clinical work is the lack of reliable normal mental age norms for the fundamental mental capacities. Until these are supplied the work of routine inspection and consultation will be largely blind or guideless. Therefore, in the present stage of the science the first concern of departments of clinical psychology in schools, universities, psychopathic institutes or institutions for defectives should be the establishment of reliable psychical (and anthropometric) normal age norms for individual traits. This, I judge, was essentially the view of Smedley, who devoted his energies, while he was connected with the laboratory of the Chicago schools, toward the establishment of developmental norms, particularly of an anthropometric nature. No one has yet made any systematic attempt on an adequate scale to give us normal mental development norms, Binet possibly excepted. Nor is it probable that reliable age norms, whether psychological, pedagogical or anthropometric, will ever be supplied, unless the work is undertaken, intensively and systematically, by a large research foundation, or unless the work is properly parcelled out among the various psychologists in universities, normal schools, public schools, psychiatric institutes and institutions for defectives.

⁵ An attempt to standardize the procedure is made in *A Practical Guide for the Administration of the Binet-Simon Measuring Scale of Intelligence, The Psychological Clinic*, 6:1911, 217-238.

PERJURY BY THE INSANE.*

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PERJURY in the sense of an act implying criminal responsibility cannot be committed by the insane in whom free determination of the will is impaired. Perjury implying civil responsibility is far from rare. Indeed the admission of the testimony of the insane for all it is worth under the common law rule by many judges is often the occasion for it. Frequently it is a source of both false and delusional accusations. Nearly two decades ago it was the subject of discussion before the French Medico-Psychologic Association. A. Culleré¹ in opening this discussion with a paper pointed out that perjury by the insane in the courts has many diverse aspects. Many insane preserve a fairly correct view of their surroundings. Few alienists will deny a certain amount of credibility in the insane. However, the extent of undue influence, as in children, and the influence of delusions must be taken into account. Certain insane falsely accuse themselves of crimes. The falsity of the accusation is readily determined where the psychosis is pronounced. Melancholiacs frequently accuse themselves of imaginary crimes. The alcoholic melancholiacs are peculiarly liable to these accusations which disappear if the

* Read in outline before the Chicago Academy of Medicine, January 18, 1912.

1 *Annales Medico-Psych.* July-August, 1893.

alcoholic neurosis be not established under total abstinence. Hysterical false accusations, like alcoholic, originate in dreams and hallucinations, but as they are persistent when mentality returns they are far more important forensically. An amount of imaginary culpability is found in congenital or acquired degenerative states. In hypomania, reasoning insanity or moral insanity, patients falsely accuse themselves of real or imaginary crimes from pride, from exaltation of the personality yielding to a desire to pose as heroes of scoundrelism or from simple perversion. Their false witness may embarrass courts but yields to well directed scientific examination. Confession alone is hence not conclusive of guilt. The insane falsely accuse others more frequently than they do themselves. Certain pseudo-lucid psychopathics, like the circular and persecutory lunatics and hysterics who have an enfeebled or perverted moral sense, denounce persons falsely because of hate, vengeance or desire of evil doing. In certain cases these denunciations enter into the whole domain of intellectual life. Not only in the perversity of hysterics do certain denunciations originate, but such also result from dreams and hallucinations remembered as facts. From these have resulted convictions of innocent persons through hysteric accusations.

In the discussion of Culléré's paper, Charpentier of Paris, said depositions of the insane should be received only after alienistic examination. Mabile cited a case where a woman nineteen years after discharge caused the arrest of her husband for a purely imaginary crime, and pointed out the false accusations of alcoholists. J. Voisin said epileptic charges needed careful sifting. Briant called attention to the dangers of concurrent denunciation of victims of folie-a-deux.

The false nature of hysteric accusations is becoming recognized even by the rather belated police. Epileptic false charges are much less frequently acknowledged, yet the epileptic mental states peculiarly tend to these. Epileptic delusions of memory predispose to these. These, as Meynert has² shown, have the following pathogeny: An epileptic attack occurs from partial arterial spasm in a hemisphere. When complete occlusion results from this, collateral hyperemia

² *Psychiatrie*, 1886.

occurs, engendering irritation and pronounced vascular contraction, leading to diminution of pressure in collateral branches. These phenomena do not produce hallucination, but the hyperemia causes a delusion of memory at the time the hallucination occurs by so coloring the subjective sensation that the sensorium retains imprint of it. This, while not a true memory, closely simulates it. Mere seeming consciousness is no evidence of a conscious directing will, since many acts apparently conscious, are done by epileptics in unconscious states. Epilepsy shocks the mental unity similarly to hypnotism. The epileptic is peculiarly open to suggestion along lines that do not antagonize the general mental trend. Shakespeare, who, as Brigham³ pointed out six decades ago, prepares his characters for the mental state which they are to develop, prepares Othello for his jealous suspicions, by making him an epileptic. (Act IV, Scene I.)

Iago: "My Lord has fallen into an epilepsy.
This is his second fit; he had one yesterday."

Cassio: Rub him about the temples.

Iago: "No, forbear;
The lethargy must have its quiet course.
If not, he foams at the mouth and by and by
Breaks out to savage madness."

As John Paget⁴ remarks, morbid states of this kind may assume a form even more dangerous than that of self-accusation. A crime is committed or supposed to have been committed. The details of an inquiry of an exciting nature fill the columns of the press. Presently the imagination fastens upon the circumstances as they are gradually revealed, and the unfortunate patient fancies that he has been a witness of the whole transaction; he becomes forward believing that he is discharging an imperative duty, and with all the clearness, coolness, and certainty characteristic of truth, deposes to the creation of his heated brain. A case occurred at Stafford, England, in 1857. The body of a girl was found in the canal at Bradley early on the morning of April 30. There were no marks of violence. About ten o'clock on the previous evening she had left the house of her aunt for the purpose of going to the place where a young man to whom she was engaged to be

³ Am. Jour. of Insanity, 1846-7.

⁴ Judicial Puzzles.

married was in the habit of working. Her road led past the place where her body was found, and it was supposed that, dazzled by the light of some coke fires, she had missed her way and fallen over the low wall by which the canal was at that spot very insufficiently guarded. About three weeks after the girl's death a neighbor (Samuel Wall) declared that she had been murdered and that he had been present when the crime was committed. He was summoned before the magistrate, whom he told the following story: On the night of April 29 he was on duty as a private watchman on some premises near the bridge which crossed the railway, that he saw two persons, a man and a woman, on the bridge and heard a woman's voice say, "Philip, don't kill me! You said you would kill me before." That the man then raised his hand and struck the woman a violent blow on the head which knocked her down. Upon this he went up and instantly recognized the man as Philip Clare, whom he well knew. He exclaimed, "Philip, you'll have to suffer for this." Clare turned and replied, "If you speak I will serve you the same." Clare then lifted the young woman up from the ground, and followed by Wall carried her over the railway bridge and down a road past some cottages until he came to the canal. Here he paused, and turning round again upon Wall said: "Now if you speak or tell any one I will kill you. I will serve you the same way as I served her and set some one else to watch instead." He then in Wall's presence plunged the woman, who still seemed helpless and insensible, into the canal close to the spot where the next morning her body was discovered.

Wall fixed the time when this occurred as twenty minutes after midnight. He was employed as a watchman and was likely to be habitually observant of the time. He said that he returned to his employer's premises, being prevented by his fear of Clare from giving any alarm; after about a quarter of an hour had elapsed Clare came to him and renewed his threats, and terrified by the apprehension of immediate violence he locked himself up in the engine-house until daylight. Upon the statement Clare was committed for trial. At this trial Wall repeated the story he had told the magistrates. There was a total absence of confirmation. It was met by proof that the

body showed no sign of having received any blow of the kind described by Wall, that there had been men at work pumping water during the whole night in the immediate neighborhood who must in all probability have heard something had the affair taken place as Wall described. It was shown, moreover, that from half-past six until about eleven P. M. Clare had been in a public-house at Bilston, which he left in company with four other men, one of whom accompanied him till within half a mile of his own house. Another witness, a neighbor, proved that about twelve o'clock he met Clare and entered into conversation with him near his own door; that they remained together until two o'clock next morning. There could not be the slightest doubt of Clare's innocence. The jury of course acquitted him. Nor could there be any doubt that Wall believed the story told. The minuteness, the peculiarity, the graphic details, the conversation, all bear the stamp of that subjective truth which English has no word to distinguish from objective.

The old jurist, Heineccius, remarks that while "confession is sometimes the voice of conscience, experience teaches us that it is frequently far otherwise. There sometimes lurks under the shadow of an apparent tranquility an insanity which impels men readily to accuse themselves of all kinds of iniquity, Some, deluded by their imaginations, suspect themselves of crimes which they have never committed. A melancholic temperament, the *tædium vitæ*, and an unaccountable propensity to their own destruction urges some to the most false confessions, whilst they are extracted from others by the dread of torture or the tedious misery of the dungeon. So far is it from being the fact that all confessions are to be attributed to the stings of conscience that it has been well said by Calphurnius Flaccus: 'Even a voluntary confession is to be regarded with suspicion.' According to Quintilian a 'suspicion of insanity is inherent in the nature of all confessions.' "

Of the dangerous results of the illegal torture, called the sweat-box, the Sleuder case was a marked example. Sleuder, put into the sweat-box, confessed the Chicago car-barn banditry in a manner suspiciously confirmatory of the theories of the police. Accident led to the discovery of the real bandits and settled the innocence of Sleuder. Despite this notorious

failure of the sweat-box, this violation of law still continues.

The Mississippi Supreme Court in reversing and remanding the case of *Ammons vs. State* said:⁵ The chief of police testified that the accused made to him a "free and voluntary statement." The circumstances under which he made it were these: There was what was known as a "sweat-box" in the place of confinement. This was an apartment about five or six feet one way and about eight feet another. It was kept entirely dark. For fear that some stray ray of light or breath of air might enter without special invitation, the small cracks were carefully blanketed. The prisoner was allowed no communication whatever with human beings. Occasionally the officer, who had him put there, would appear, and interrogate him about the crime charged against him. To the credit of our advanced civilization and humanity it must be said that neither the thumbscrew nor the wooden boot was used to extort a confession. The efficacy of the sweat-box was the sole reliance. This, with the hot weather of summer, and the fact that the prisoner was not provided with sole-leather lungs, finally after "several days" of obstinate denial accomplished the purpose of eliciting a "free and voluntary" confession. The officer, to his credit, says he did not threaten his prisoner, that he held out no reward to him and did not coerce him. Everything was "free and voluntary." He was perfectly honest and frank in his testimony, this officer was. He was intelligent, and well up in the law as applied to such cases, and nothing would have tempted him, we assume, to violate any technical requirements of a valid confession--no threats, no hope of reward, no assurance that it would be better for the prisoner to confess. He did tell him, however, that "it would be best for him to do what was right," and that it "would be better for him to tell the truth." In fact this was the general custom in the moral treatment of these sweat-box patients since this officer says: "I always tell them it would be better for them to tell the truth, but never hold out any inducement to them." He says in regard to the patient *Ammons*: "I went to see this boy every day and talked to him about the case, and told him it would be better for him to tell the truth; tell every-

5 32 Southern Reports, 9.

thing he knew about the case." This sweat-box seems to be a permanent institution, invented and used to gently persuade all accused persons to voluntarily tell the truth. Whenever they do tell the truth—that is, confess guilt of the crime—they are let out of the sweat-box. Speaking of this apartment, and their habit as to prisoners generally, this officer says: "We put them in there (the sweat-box) when they don't tell me what I think they ought to." This is refreshing. The confession was not competent to be received as evidence.⁶ Defendant, unless demented, understood that the statement wanted was confession, and this only meant release from this "Black Hole of Calcutta."

"Such proceedings as this record discloses cannot be too strongly denounced. They violate every principle of law, reason, humanity, and personal right. They restore the barbarity of ancient and medieval methods. They obstruct instead of advance the proper ascertainment of truth. It is far from the duty of an officer to extort confession by punishment. On the contrary, he should warn his prisoner that every statement he may choose to make may be used against him on his trial."

The psychic factors which produce false confessions underlie the mental state of the dying. The exhaustion which produces resignation is an apathetic condition which decidedly predisposes to suggestion or undue influence. The irritable suspicious state so often present readily lends itself to suggestion. It predisposes to false accusation based on a desire for vengeance. While dying declarations are popularly supposed to be peculiarly veracious, neither law nor experience justifies this opinion. A dying declaration, according to the Illinois Supreme Court,⁷ is but secondary evidence, and it is error to instruct the jury that such declaration is the testimony of one witness and is entitled to such weight as it would be entitled to had it been stated to the jury by one witness. Dying declarations may be impeached in any of the modes by which the evidence of the declarant could have been impeached had he or she been alive and testifying in open court. When a dying

⁶ *Am. and Eng. Ency. of Law*, p. 531, note 3.

⁷ *Nordgren vs. People*, 211 Illinois Reports, 425.

declaration that the accused had given the declarant whiskey and strychnine is given in evidence, the accused may show that the declarant entertained a spirit of malice and revenge toward him because he had abandoned her on account of her habits and had filed a bill of divorce against her for habitual drunkenness. Where the charge against the accused is that he gave his wife a bottle of whisky and strychnine, it may be shown that she kept whisky and strychnine in her room after her separation from her husband, and as explanation of such act and as part of the *res gestae* it may be shown that she was despondent and made declaration tending to show an intent to commit suicide. Dying declarations may be impeached by proof of contradictory statements on material points, even though such contradictory statements are not made *in extremis*.⁸

The validity of dying declarations therefore requires certain tests. The persons must know that they are dying. The mind must be clear from mental perturbation. The declaration must be spontaneous, free from any outside suggestion whatever. The possible influence of feeling against the person accused must be taken into account.⁹

In a case in which I was retained by R. E. Cantwell, a woman epileptic was found with the left parietal bone broken, lying in a pool of blood near a fender. Both eyes were blackened but there was an occipital contusion. She was sent to the county hospital. Here trephining was done, resulting in extensive hemorrhage from the middle meningeal artery, followed by collapse and transfusion of normal salt solution. Soon after several severe epileptiform attacks occurred. These were followed by a semistuporous state with some failure of vision. While in this state her husband was brought into her presence. She was asked if he had struck her, but no attempt was made to determine whether she regarded herself as dying, nor to apply any of the tests laid down by the Supreme Court, nor to settle whether she recognized her husband. She soon rallied, and according to the interne thereafter became as "clear as a bell." During this state of mental clearness she voluntarily and spontaneously made a statement that her

⁸ Dunn vs. People, 172 Illinois Reports, 532.

⁹ 211 Illinois Reports, 425.

injuries had been received from an accidental fall. The police resisted an attempt to secure release of the husband on bail on the ground that she was insane when the voluntary statement was made. On examination I found that she believed she was going to recover; that she believed her injury to be the result of a fall; that she was very anxious to see her husband, and complained bitterly that he had not been to see her since she was in the hospital; that she could not see clearly since she mistook every man who came near her for the husband, but admitted the error when told of it. When told that her husband was in jail charged with assault upon her, she asked who had told that lie, and when informed of her alleged dying declaration, promptly repudiated it as never made by her. Bail was promptly accorded by Judge McEwen on statement of these facts. In this case the sweat-box identification system of the police was clearly evident. The police opposed the bail, not with medical or other evidence, but with the unsworn statements of hearsay by a patrolman.

The spite element of a dying declaration is a serious danger to the general practitioner. While poison accusations are not exceptionally rare, abortion accusations are far from infrequent. Out of spite abortion victims often accuse physicians who have refused to perform abortion from the feeling that the skill of the physician would have saved them suffering and death, whence their attempt at vengeance.

In certain European cases, one of which Gaboriau¹⁰ reports, imbecile accusation have formed the basis of prosecutions.

In European political crimes the imbecile or insane agent provocative of the police is at once an actor, a spy and a police witness. In a recent alleged case of "labor slugging" in Chicago a criminal lunatic, acting under the influence of the police, caused the arrest, indictment and trial of the head of a Labor Union.¹¹ In this case in which I was consulted by James T. Brady and C. E. Erbstein, the witness (Pardee) broke down on cross-examination and admitted he had been sent to the Pontiac reformatory for an attempt to swindle a railroad company, that he had escaped and gone to Missouri

10 "In Peril of His Life."

11 *People vs. Simon O'Donnell, et al.*

where he was caught in a forgery, that he had been sent first to state prison and then to the criminal department of the Fulton Insane Hospital. His picture and Bertillon measurements were in the Chicago Rogues Gallery. In this case the Judge had refused bail. The state's attorney nolle prossed the case.

The procedure for impeaching an insane or hysteric witness has been already cited¹² but will bear repetition here.

Mental capacity, like other unknown qualities or conditions, may be shown by evidences and circumstances of three classes: 1. The person's outward conduct manifesting inward conditions and causing of conditions. 2. Pre-existing external circumstances tending to produce special mental conditions. 3. Prior or subsequent existence at the time in question may be inferred.¹³

Every act of a person's life is relevant to the issue.¹⁴

In giving facts upon which the witness bases his opinion he should be permitted to state every fact which could be reasonably made the foundation of opinion as to the mental condition of the testator. Under this rule the party to the suit was properly permitted to testify as to the conduct and conversation of the testator and his frailties.¹⁵

Where in a criminal action the defense is insanity the defendant has the right to prove in this issue not only the illusions, insane acts and conduct, but also the facts which may account for such acts and appearances and which may reveal an adequate cause for the mental aberrations testified to.¹⁶

While the testimony in support of his claim that the testatrix was subject to insane delusions shows that she accused her neighbors of theft it was held that testimony was also admissible to show that said neighbors were reported to be honest people in order to show that the situation was such that a person of sound mind would not entertain such belief.¹⁷

12 *Alienist and Neurologist*, February, 1911.

13 *Wigmore on Evidence*. Vol. 1, Sec. 227.

14 *Wigmore on Evidence*, Vol. 1, Sec. 228.

15 *Larbach vs. Jones*, 22 Kas. 497.

16 *People vs. Wood*. 126 N. Y. 249.

17 *Titus vs. Gage*, 70 Vt. 16.

Upon the question as to the general sanity of the devisor letters addressed to him in his life-time by a person since dead and found amongst his papers after his death are admissible in evidence if it be shown that the devisor answered such letters or did some act in relation to them.¹⁸

Where it is admissible to prove insane delusions it is also admissible to prove facts upon which the delusions are based as tending to establish insane delusions and the good faith of the accusations.¹⁹

Where there was evidence tending to show that defendant was laboring under insane delusions based upon public rumor and it was claimed that no such public rumor existed it was held to be admissible to show that such public rumor did not exist and that there was no basis for such an opinion.²⁰

Where the evidence of the acts, conduct and declaration of the accused at various periods of his life are introduced in his defense to prove his insanity at the time of the committing of the crime, the prosecution in rebuttal is not limited to particular acts, conduct or declarations so put in evidence in behalf of the prisoner, but may offer evidence of other acts, conduct and declaration of the accused to show that he was sane within the same period.²¹

The lay witness may give his opinion of the sanity of the person whose sanity is in issue after first stating the facts upon which his opinion is based.²²

In regard to the more difficult problem of insanity in a witness, it has been held:

Insanity of a witness may be proof for the purpose of impeachment.²³

Adjudged cases upon this subject are few. But the doctrine seems to be that the condition of mind which is capable of appreciating the truth is not a ground of excuse of a witness, but must go to his credibility and every act indicative of insanity is admissible and must be submitted to the jury.

18 *Latham vs. Wright*, 6 Neville, Manning's Report, (Eng.) 132.

19 *Spivey vs. State*, 77 S. W. Rept. 444.

20 *State vs. Jones*, 50 N. H. 382.

21 *U. S. vs. Holmes*, 1 Clifford C. C. Rept. 98.

22 *Roe vs. Taylor*, 45 Ill. 485. C. U. T. Co. *vs.* Lawrence 2, 10, Ill.

23 *Wigmore on Evidence*. Vol. 2, Sec. 931.

In the case of *Pease vs. Burrows*, (86 Me. 153) it was held that it was even proper to cross-examine a witness upon such acts as indicated insanity.

The question whether witness sane at the time he testified was insane at the time of the transaction in regard to which he testified goes to the credibility of his testimony and not to his competency and is therefore a matter for the jury.²⁴

In the case of *Territory vs. Padilla*, (8 N. M. 511,) it was held, that where the court failed to instruct the jury upon special request as to the sanity or insanity of a witness so that the jury could consider same in weighing the credibility and weight to be given the testimony even though the testimony in the attack made was very slight, is was held error. And it is further held that if there was any testimony in that regard the court should have instructed on the subject if specially requested.

In the case of *City of Guthrie vs. Schaffer*, (Okla. 54, Pacific, 699,) it was held that if there is sufficient intelligence to understand the nature of an oath and if he can correctly relate the facts and circumstances he should be permitted to testify and the court gave the following instruction:

"Testimony is before you tending to show that since the time of plaintiff's injury her mind is somewhat impaired and you are instructed that in determining the weight to be given her testimony you should take into consideration testimony tending to show mental condition of plaintiff at this time and from such testimony together with her own statements and evidence as to how the accident occurred give her testimony such weight as in your judgment the same is entitled to."

Evidence that a witness who has been examined was of unbalanced mind and memory is admissible to attack the credibility of his testimony although it is not offered as an objection to his competency before he was sworn.

It is not proper to reject evidence although merely because the terms in which it was offered relate indefinitely to some time preceding the trial.²⁵

24 *Halcomb vs. Halcomb*, 28 Conn. 177.

25 *Rivers vs. Ghio*, 3 E. D. Smith Rept. (N. Y.) 264.

It is held error to exclude evidence of acts and conduct bearing upon the mental condition of the witness prior to the date of the alleged assault.²⁶

In the prosecution for obtaining a deed by false pretenses evidence of the prosecutor's mental condition subsequent to signing and that his condition was the same prior thereto and continued unchanged up to the time of the trial was admissible where the prosecutor was a witness to aid the jury in understanding his strength of mind when the deed was signed and to determine his credibility.²⁷

A person afflicted with insanity is admissible as a witness if it appears to the court upon examination that he has sufficient understanding to appreciate the obligations of an oath and to be capable of giving a correct account of the matters which he has seen or heard with reference to the account at issue and his credibility is a fact to be determined by the jury.²⁸

Insanity, unless amounting to entire extinction of reason, is not now considered grounds for absolute exclusion from the witness box. It is, however, admissible in order to affect his credit to prove that the witness was subject to insane delusions.²⁹

In the case of *Halcomb vs. Halcomb*, the court said, "The witness apparently understands and apprehends the obligation of an oath and appears desirous of telling the truth."

On post hoc reasoning based on the credibility of her story it is inferred that her mind imagined fanciful occurrences as real. The court cannot say that her illusions rendered her testimony altogether unreliable as some occurrences were within her ocular vision. On the other hand, while her illusions in some degree at least weakened somewhat, it did not utterly destroy her testimony, but raised doubts as to his actuality and reliability and certainly the cause of such conditions should be considered somewhere and if not sufficient to be

²⁶ *State vs. Kelly*, 57 N. H. 549. xxx.

²⁷ *State vs. Moatz*, 108 Ia. 14.

²⁸ *D. C. vs. Armes*, 107 U. S. 519. *Mayor of Sainesville vs. Caldwell*, 81. Ga. 78.
—*Walker vs. State*, 97 Ala. 85.

²⁹ *Wharton on Criminal Ev.* 9th Ed. Sec. 370.

acted on by the court in excluding her testimony altogether must be considered by the jury or not at all.³⁰

The question of responsibility for actions due to dream states would seem clear under either the right and wrong test.

One phase of alcoholic insanity is peculiarly apt to appear in false charges, although insane jealousy may arise, as Stefanowsky remarks,³¹ spontaneously in the insane, especially in the degenerate, alcohol is particularly noticeable as a predisposing cause. It has been plausibly claimed that abuse of alcohol produces atrophy of the genital organs and diminishes the power of fecundation and sexual ardor. Lancereaux finds genital pathological lesions in alcoholics to resemble those of senility. The testicles atrophy and the spermatozoa disappear. In the female menstrual irregularities occur, followed by cessation of the menses. This degeneracy in sexual physiology is accompanied by physical and moral impotence, of which jealousy is a necessary concomitant. Krafft-Ebing³² has remarked that among many of the alcoholics may be found insane jealousy, which is part at times of a general persecutory state and at times a spontaneous phenomenon. It is interlaced frequently like a red thread, with the course of alcoholic psychic degeneration and appears often at the onset of alcoholic intoxication and leads the patients to bloody, sometimes mortal acts, against the innocent victims of their suspicions.³³ Krafft-Ebing,³⁴ in a later study on jealousy in alcoholics, remarks that he has observed this in eighty per cent of alcoholics still capable of sexual life. He is of opinion that it can be explained as much by extreme enfeeblement of sexual power as by the erotic tendencies still existent. Lau-

30 *Contra. State vs. Hayward*, 62 Minn. *74 as to the proposition of the insanity of a witness.

31 *Alienist and Neurologist*, 1893.

32 "Treatise on Mental Disease."

33 E. C. Spitzka points out that the persecutory delusions of alcoholism relate to the sexual organs, sexual relations and to poisoning. This fact is so constant a one that the combination of a delusion of mutilation of the sexual organs, with the delusion that the patient's food is poisoned and that his wife is unfaithful to him may be considered as nearly to demonstrate the existence of alcoholic insanity as any one group in mental pathology can prove anything. With this there are unpleasant hallucinations. There is this peculiarity of insane inebriates that their acts are not consistently regulated by their delusions. Thus, one patient may live in comparative tranquillity with a wife whom he suspects of committing adultery in the boldest way and before his face night after night. Another under the influence of the same delusions may, in mortal fear of being poisoned by her supposed paramour's interest, kill his wife in a fit of blind fury.

34 *Jahrb. f. Psych.*, X. 2.

rent³⁵ has observed instances of similar enfeeblement of sexual appetite in criminals. "I have met," he says, "very often young, vigorous men, who told me that they preferred a glass of wine to a woman. A 36-year-old counterfeiter, for example long addicted to alcoholic abuse, was but very little tormented by erections and thought but little of women. When liberated in April of the preceding year he had coitus only in the middle of July following. A congenital degenerate, placed alcohol infinitely above women, preferring to the ephemeral joys given or sold by the latter, the pleasures of alcohol. He had lost his wife eighteen months previously and had copulated but once since. Such a dispomaniac, feeling himself enfeebled in his virility, commences to suspect whether his wife has not become unfaithful and this suspicion becomes the point of departure of an insane jealousy which has but too often fatal results.

It is obvious that the morbid psychology of evidence requires more attention than it has received in the law curriculum.

35 *Les Habitués des Prisons de Paris.*

(TO BE CONTINUED.)

IS GENIUS A SPORT, A NEUROSIS OR A CHILD POTENTIALITY DEVELOPED?

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RUSKIN'S mission, according to Frederick Harrison, was to preach the aesthetic study of nature and to justify Turner as its chief interpreter. After his return from his fifth visit to the Alps at the age of twenty-three he began "Modern Painters" to the admiration of his family circle. Its dominant element was a demand for humble worship of Nature according to the Ruskinian idea. Canaletto, Poussin and Claude were blind leaders of the blind. This doctrine was asserted in Oxfordian donnish fashion, entangled with indubitable British philistinism of the very kind against which Ruskin claimed to revolt. There was in it the same teteologic trend which ignoring progressive development marred so much of Ruskin's mentality. The studies of Nature are largely what Ruskin read into it, in the full spirit of the biblical expositor making a special pleading for a favorite doctrine perceived through a mental strabismus. As Frederick Harrison, in his eloquent plea of confession and avoidance admits, "A man who knew little of theology except the Bible and the sermons, admitted into an Evangelical Anglican household was not equipped to lecture Auguste Comte, Mill, Buckle and Herbert Spencer about the evolution of civilization or the history of religion. Nor

was it quite decent to mock at the economists from Adam Smith to Henry Sedgwick, with no more knowledge of their books than has any aesthetic curate in deacons' orders." Harrison partly points out these limitations and some of their factors when he remarks: "He never could be brought to understand this. In other words he was destitute of the sense of fair play which hears both sides and demands the exclusion of the alternative hypothesis as a test of truth. His education in a kind of Puritan (it was destitute of Puritan individualism and had a reverence for authority in the shape of bishops which Puritanism always eschewed) nursery, and the hard shell of egotism in which his whole early life was cribbed, made this impossible." And so John Ruskin went forth to take up his parable against them all—artists, critics, historians, philosophers, theologians and economists. As in theology so in history, as in art, so in economics, Ruskin was perpetually constructing out of his own head new schemes and theories without any serious or systematic knowledge of theology, history, economics, or even art." The title designed for "Modern Painters" was "Turner and the Ancients," but on advice of the publisher's reader it was changed to: "Modern Painters; their Superiority in the Art of Landscape Painting to All the Ancient Masters proved by Examples of the True, the Beautiful, and the Intellectual, from the Works of Modern Artists, especially from those of J. M. W. Turner, Esq. R. A." The book was issued anonymously as by "A Graduate of Oxford."

In May, 1844, the whole family started for the Alps for the sixth time. He went home by way of Paris and visited the Louvre. Here with his instability he saw much in ancient Italian art to which he had hitherto been indifferent. He wonders how he could have been at twenty-five so ignorant of early Italian painting or rather so callous, since at twenty-two he had seen Milan, Pisa, Florence, Venice and Rome. In 1844 he saw for the first time the greatness of Titian, Veronese, Bellini and Perugini. While he recognized this, its evolutionary significance never dawned upon him.

The autumn and winter of 1844 was given to study, mainly of medieval history and art, to Rio and Lord Lindsay; and it seemed essential before continuing *Modern Painters* to work

at Pisa and Florence. Accordingly, in April, 1845, he started abroad, for the first time without his parents, but with George, his valet, and Couttet, his Chamouni guide. Some lines written at Geneva, on Mount Blanc, in a deeply religious way convinced him that he could say nothing rightly in verse, so he renounced poetry forever. Lucca seems first to have opened his eyes to the power of building, and the tomb of Ilaria di Carretto became "a supreme guide to him ever after." He now had books and pored over Dante (in Cary's translation), Sismondi's "Italian Republics," and Lord Lindsay's "Christian Art." Pisa and Campo Santo—where we saw "the entire doctrine of Christianity painted so that a child could understand it"—deepened his enthusiasm for medieval art. He drank in the whole Gospel in these frescoes, "straight to its purpose, in the clearest and most eager way." Here at Pisa, in the Spina Chapel, he saw the school of his Italian studies fixed for many years, as he sat drawing with intense zeal from six in the morning till four in the afternoon.

From Pisa to Florence, where he flung himself into monasteries and chapels, at Santa Maria Novella, Santa Croce, and Santa Marco, absorbed in Angelica and Ghirlandajo—"Lippi and Botticelli were still far beyond him"—or strolling up after dinner to Fesole or San Miniato. At Florence his work was "thinking and writing." Thence he went north to Macugnaga under Monte Rosa—where, oddly enough, he found little to interest him, except in reading, for the first time seriously, Shakespeare's Roman plays; and as to Val Anzasca it had no interesting features! Such was his "desultory, but careful reading which began in his mossy cell at Macugnaga." Thence he took the St. Gothard route to Faido and Dazio Grande, and did the work which is one of the gems of Modern Painters, vol. iii. At Bavenoz he was joined by Harding and they toured about the lakes and to Verona—"no happier epoch than it was to both." "Though Rouen, Geneva and Pisa have been the centers of thought and teaching to me, Verona has given the thought to all they taught." He went on to Venice for Harding's sake, where for a week they lounged about the markets and the boats, looking for effects of light on city and on sea. But in a spare hour they dropped into the Scuola di San

Rocco. There of a sudden, Tintoretto revealed himself and largely determined the current of Ruskin's future life.

There have been recorded (mainly by himself) a good many casual incidents which determined the bent of his life—the gift of Roger's Italy, the first sight of the Alps, a bit of ivory round a thorn, the tomb of Ilaria, the Campo Santo, Mont Blanc, a Veronese in the Louvre—but this first vision of the Tintoretto of St. Roch seems to have been the most real and most important of all these æsthetic conversions. But for that “sunny, but luckless day,” when the porter opened the doors of the then neglected hall as if they were the gates of Paradise, Ruskin thinks he should have “written the stones of Chamouni instead of the Stones of Venice.” But Tintoretto swept him away into the schools of Venice itself. This was the new heaven of invention into which he was suddenly summoned. And at the same time came on him—and on the world—“a new fatality,” the consequences of which he little saw at the moment—the discovery of photography.

At Venice with Harding, studying pictures and sunsets, they were joined by Boxall, R. A., some time keeper of the National Gallery; and they saw much of Mrs. Jameson—who was “absolutely without knowledge or instinct of painting—but candid, industrious and pleasant.” A fever drove him away—malarious, (according to Harrison) though Ruskin will not admit it—nobody goes studying in Venice without catching malaria. He dragged himself home in deep depression, and with a vision of death before him. He now, almost for the first time, prayed to God with fervent belief and deep humility. And there he had the consciousness of his prayer being answered. The experience did not last. Little by little the sense of direct relation with Heaven passed away from him. He had scarcely reached home in safety before he had “sunk back into the faintness and darkness of the Under-World.”

Ruskin never would see, as do many persons refuse to see, how largely states of temperament, of health, and of grief, hope and despair, react on spiritual impressions and religious elation. “Experiences, like ghosts, are,” Harrison logically says, “too often problems for the physician.”

Ruskin's attitude as to religion, whilst he never became

a sceptic or an atheist, continually shifted, Frederick Harrison remarks, and was in close relation to his moral, mental and physical equilibrium at the time.

All the winter of 1845-46, Ruskin was at work on his second volume, which appeared early in the summer of 1846. He had two distinct instincts to satisfy in it, he writes: the first, to explain the quality of the beauty in all happy conditions of living organisms; the second, to illustrate two schools then unknown to the British public—that of Fra Angelico in Florence and Tintoretto in Venice. The style of the book was modeled on Hooker, which was a pity. And, not unnaturally, when it was ended, he felt tired. "It is usually read only for its pretty passages," he thinks; "its theory of beauty is scarcely ever noticed;" and its praise of Tintoretto did not induce the nation to buy any good example of him. His personal and literary influence turned the taste of the age towards what the French called the "Primitives."

Hardly were the last pages of *Modern Painters*, Vol. ii, returned for "press," when the tired writer and his family set off again for the Alps. The unfailing remedy for all ills was not tried in vain—"the power of mountains in solemnizing the thoughts and purifying the heart." He records the "immeasurable delight" of watching the ship plunging through the waves towards Calais pier, and the prospect "of the horses' heads set straight for Mont Blanc tomorrow." John tried, with scanty success, to convert his father from *Modern Painters* to Venetian architecture. The son was impetuous; but the father was obstinate. They all returned to Chamouni, where more studies of rocks and glaciers were made with intense rapture.

Returning home the young author found himself already famous and welcomed in the world of letters. Miss Mitford found him "the most charming person I have ever known." John Murray sought to enlist him for Albemarle Street, Lockhart enrolled him in the *Quarterly Review*. He was induced to write a review of Lord Lindsay's "Christian Art." He knew that Lord Lindsay knew more about Italian painting than he did himself, but there was another motive—"one of irresistible nature." Charlotte, Lockhart's daughter, "a Scottish fairy, White Lady, and witch of the fatalist sort, looking as if she had

just risen out of the stream in Rhymer's Glen, and could only be seen by favoring glance of moonlight over the Eildons," was met at the house of Sir Humphrey Davy's widow. John naturally fell in love with Sir Walter Scott's fairy granddaughter, sighed in silence, could never come to any serious speech with her, "she didn't care for a word I said." At the dinner table he quarreled with Mr. Gladstone about Neapolitan prisons across her, as usual did his wooing by the pen, wrote on Christian Art in order to charm her, found it hopeless, went away in despair, again fell into despondency and sickness.

Reduced again to a "heap of white ashes" in the spring of 1847, he retired to Ambleside and fell into a state of despondency such as he did not know again until 1861. With disappointment, dyspepsia, and the tedium of his Quarterly article, he came home in such a state of ill-health that his parents sent him off again to be treated by Dr. Jephson at Leamington. And now, failing in love, he surrendered himself to friendship. He says, "I get distinctively attached to places, to pictures, to dogs, cats and girls"—but to a soul-kinship with men he was not at all disposed. Let no one suppose that John Ruskin was a man without friends, and did not cherish many life-long friendships. He was one of the most lovable and loving of men, full of sympathy and open heart. But his friendships with men were not that consuming passion as was his love for mountains, seas, pets and paintings. So off he went to visit Macdonald Macdonald at Crossmount beneath Schellallin in the Highlands. Disgusted with "sport," in melancholy mood, he dug up thistles on the moor, lay awake listening to the hooting of the owls, sadly pondered upon this life—on Anglican Evangelics—and the life to come.

Here occurs a big gap of two years in the author's bibliography. During these two years took place his marriage, the bridegroom's dangerous illness, his settling in Park Street, London, and his writing the *Seven Lamps of Architecture*. The parents came to the conclusion that John's health and spirits were only to be cured by matrimony. They pressed him to marry the daughter of their old Parthshire friends, the Grays. Seven years before this they had been visitors at ²Herne Hill. The girl had challenged John to write her a fairy-story, which

he cheerfully undertook. It was the "King of the Golden River"—a medley of Grimm, Dickens, and the Alps. Accordingly, somewhat suddenly and perhaps unthinkingly, John Ruskin was married at Perth to Euphemia Chalmers Gray on April 10, 1848, a day famous in the annals of London Chartism. She was a grand beauty, of high spirits, whom all the world knows as the triumphant wife in the famous picture, "The Order for Release," in the Tate Gallery. In their way south, Ruskin caught a sharp attack in the lungs whilst sketching in Salisbury Cathedral, and his life was in great danger. Foreign travel, the invulnerable panacea, and in company with the whole family, was tried again; but a fresh attack in Normandy forced them back. At last they set off, stopping at cathedral cities, John absorbed in architecture. In October the pair set up house in Park Street, and Ruskin fell with fury on the compiling of *Seven Lamps*, which occupied him the winter of 1848-49. It was published in the spring of 1849; but in the meantime the whole Ruskin family were off again to the Alps—John with guide Couttet and valet George, but without his wife. The memoirs, the family and biographers suppress the circumstances leading to the annulment of the marriage. Like Carlyle there was clearly a lethe-mic toxemic element associated with sexual neurasthenia. Prescription of matrimony by the Smollettian mother failed as a remedy to the misery of two people. It is obvious from the recurrent attachments that Ruskin was not destitute of heterosexuality. The marriage of Miss Gray was annulled for congenital sexual defect, a matter of common fame among English literati, despite the suppression of the facts. Swift's relations to Stella resembled those Ruskin attempted to establish with his wife, later married to Millais. Ruskin suffered from a congenital sexual defect which under canon not to speak of common law invalidated marriage. In the papal court of the Rota such marriages were frequently declared null and void, as the medico-legal work of Zaccheus shows.

Ruskin was thirty years old; an art critic justly esteemed when he met Miss Euphemia Gray, the daughter of a provincial clergyman. Ruskin, as one of his biographers euphemistically observes, was not a man to love a woman because she was a woman but his aesthetic sense, in which his sexual appetite

probably found expression, as it does in much lower types of mind like those of the victims of Narcrosanism, was satisfied by Miss Gray's beautiful face and form. Art and music often afford outlets for the appetite in sexual defectives. Soon after Ruskin's marriage the Millais pictures began to attract attention and their vogue was aided by Ruskin's judicial praise. Millais was commissioned to paint Mrs. Ruskin's portrait. Millais was a normal red-blooded man Mrs. Ruskin as passionate, well developed woman whose married life with Ruskin had been platonic. The sexual impulse was awakened in Mrs. Ruskin, who evidently had not realized its strength or significance before Millais found himself in love with Mrs. Ruskin. Mrs. Ruskin's devotion to Ruskin ere Millais came into their life was picturesque. In her, psychophysiological states evidently occurred in which, as Havelock Ellis points out, the sexual impulse in women differs from that in men. It shows greater apparent passivity. It is less apt to appear most complex spontaneously, more often needing to be aroused. It tends to become stronger after sexual relationships are established. The threshold of excess is less easily reached than in men. The sexual sphere is larger and more diffused. There is a more marked tendency to periodicity in the spontaneous manifestations of sexual desire. Largely as a result of these characteristics, the sexual impulse shows a greater range of variation in men than in women, both as between woman and woman and in the same woman at different periods.

One day, hand in hand, humbly and honorably, they walked into Ruskin's library his friend and his wife. They knelt before him, and in a brave yet broken voice John Millais told of the love that had grown in his heart for the woman who knelt beside him; and then she told her story, while the husband listened, amazed, but quiet. When they had finished the sad confession the dreamer closed his book and bade the imploring couple arise.

Then he gave them to each other, relinquishing all claim upon the woman who bore his name, blessing them because they had been honest with him.

Steps were taken at once, with Ruskin's aid, to remove any obstacle to the immediate marriage of his wife and Millais. Divorce in due season was granted. The next day—in 1855—

John Millais led the woman of his choice to the altar—her former husband giving her away and standing by as the principal witness.

The strange ceremony ended, Millais took his wife home, and, seemingly inspired all the more by her presence, began to paint pictures which raised him to still greater prominence, and which were still praised, when praise was due, by John Ruskin.

(TO BE CONTINUED.)

APHASIA AND APRAXIA.

A CLINICAL LECTURE.

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THAT the subject of Aphasia has been again brought into prominence and that new points and problems in this respect have been the subject of great discussion of late years must have been also observed even by those medical men who are not directly interested in the subject of Neurology, but who came to a knowledge thereof through the general medical literature. Aside from this they must have repeatedly noticed the word "Apraxia" in its semiologic conception, and that with this denotation were meant disturbances very closely related to the aphasic symptom complex. A closer investigation of these actual questions, however, has no attraction for one who is not a neurologist, because the essential contributions to this subject which are widely scattered in the literature, present in many respects too great a mass of psychologic, anatomic, and physiologic specialties, and occupy themselves with such a complicated terminology that for the understanding of the same, a special adaptation is required. And yet, the general practitioner should be given the opportunity to form a correct opinion concerning this subject, because it has such great significance for the most frequent clinical cerebral affection, namely, cerebral

hemorrhage. I will, therefore, endeavor to present to you a review of this subject in the simplest possible manner, without however, omitting any essentials, at all times giving a sufficient elucidation of the most important clinical and practical points.

To begin with, let us give a brief sketch of the historical evolution of our knowledge concerning aphasia. Gall already spoke of a special cerebral localization for the faculty of speech, which he localized in an arbitrary manner, in the orbital convolution of the frontal lobes. The French clinician, Bouillaud, already believed in 1825, in a fronto-bilateral location of the organs of articulated speech. He did not, however, contrary to his teacher Gall, formulate and develop for himself a clear picture concerning the nature of motor aphasia. He emphasized the difference between a paralysis of the speech mechanism, and another condition in which these muscles in nowise showed impairment of their motion as such, but only an impairment of their utility for the formation of words.

Against this bilateral localization of aphasia, Marc Dax appeared in 1836, supported by the coincidence which he discovered of loss of speech with right-sided hemiplegias. He placed, in spite of lack of autopsy findings, the seat of "memoire verbale" in the left hemisphere. P. Broca finally advanced the anatomical proof for the general correctness of Dax's contentions, in the papers published by him between 1861-1865. He showed at the same time, the exceptional cases with right-sided localization of the motor speech centre. His chief service, however, consisted in the conclusion which he reached from his numerous autopsies, namely, that the motor centre was not to be looked for in the frontal pole, but at the foot of the third lower frontal convolution. This conception at once gained general acknowledgment through its acceptance by the great clinician, Trousseau.

During the decennium following Broca's epochal discovery, there accumulated numerous observations, especially by English authors, (among whom Hughlings Jackson and Charleton Bastian should be mentioned above all) of a different form of aphasia, in which the lesions were found in the left temporal region, and which was not characterized by an inability to form words, but

by numerous mispronunciations, omissions, word-mutilations, paraphasia and gibberish (jargon aphasia.) Along with this Bastian showed that these patients also manifested an impairment of word understanding; that although they were not at all deaf, they perceived what was spoken to them only as a noise, without understanding what was said. In 1874 Wernicke rendered the great service in designating this phenomenon as sensory aphasia, upon which these paraphasic symptoms depend, because the sound-picture centre in the upper left temporal convolution (we call it to-day Wernicke's zone) exercises a regulating influence over Broca's motor speech-centre. In connection with the work of Wernicke the conception, which we now designate as the classical aphasia theory, gained at once general acknowledgment, and we will now review it in its essential points in the following manner:

1st. The anterior motor, or Broca's, speech-centre which is to be found at the foot of the left frontal convolution, forms the gathering point of the kinesthetic memory-pictures which are essential for the faculty of speech; i. e., such memory pictures which make possible the repetition of previously executed analogous movements. In the event of a destruction of this centre, there develops the motor or expression-aphasia, i. e., the inability to transpose concepts or ideas into words. It is true that such a patient is able to emit sounds, and that his speech-muscles are not at all paralyzed as those of a patient with anarthria following bulbar paralysis, but their regulated co-working which is essential for speaking has become impossible. If the patient as a child, must have learned gradually how one forms words with the speech mechanism, this acquired knowledge has now become blotted out from his memory. The difference between the speech disturbance of the motor-aphasic and that of the anarthric, the French language expresses in a much shorter and more pregnant manner than the German, "*l'aphasique ne sait plus parler, l'anarithique ne peut plus parler.*"

2nd. In the posterior sensory, or Wernicke's speech-centre, of the left upper temporal convolution, the clang or sound pictures which make the understanding of speech possible, are retained. The loss of this centre does not mean a loss of the faculty of speech, but of the understanding of speech. Thus,

such a patient hears the word which is spoken to him but can no longer understand its meaning because he does not liberate in his consciousness the conceptions which it conveys. His mother tongue sounds to him in a similar way as a foreign language sounds to a healthy person who has learned little or nothing of it. He has lost the memory for the meaning of the words. That the sensoric or perceptive aphasia is often accompanied by "paraphasia;" that such patients constantly in speaking, "misspeak," i. e., instead of the words which are pertinent, they bring forth words of a similar sound, depends upon the following:- We unconsciously first test internally the sound of the word which we wish to utter, this being done through the medium of Wernicke's sound-picture centre. When this centre functions no longer the patient easily brings forth false words, which he himself does not recognize, because he does not understand his own words on account of his sensory aphasia.

3rd. If a pathological process destroys both the anterior and posterior speech-centres, and in consequence both speech faculty as well as speech understanding are abolished, we speak of it as total aphasia. Thus far, as you see, things stand very plainly. The complication arises from the fact that the centre for motor aphasia is not only connected with the cortical centres of the lip, tongue, and laryngeal muscles; and the one for sensory speech only with the acoustic cortical zone; but that, first, these two cortical zones (i. e., Broca's and Wernicke's centres) also communicate with one another by means of association fibres; second, with the higher psychic centres of the frontal cortex (the so-called centres of concepts) and third, with the cortical apparatus which makes reading and writing possible. A special reading centre is located in the gyrus angularis, which is the memory field for the recognition of written signs, and the destruction of which causes alexia or word-blindness.

In 1881, Exner endeavored to localize a word centre in the foot of the left middle frontal convolution, and Charcot agreed with him in this respect. This, however, is now recognized as erroneous, and the "writing-centre" has been identified with the one of the hand and finger in the left precentral gyrus.

The network of these various association fibres is concerned with those psychic functions which we designate in short, as

inner speech. Under this we understand everything which must occur in our brain under the threshold of consciousness, before we put a thought in words, and then project these words externally by speech and writing; and before we can gain knowledge from the speech or writing of others. This inner speech develops ontogenetically, in that the child first repeats words heard, then it associates with these a certain concept; later, when this concept asserts itself, the child produces the word; finally, in learning to read and write it associates with the individual sounds, definite symbols, etc.

Of primary importance for the understanding of the theory of aphasia is the fact that all the association fibres concerned with inner speech are located in the cerebral cortex while the neurons concerned with external speech take their course through the medullary substance. Thus, it will be seen that a cortical lesion of Broca's centre must produce more symptoms than a subcortical one. In the former lesion the association network of inner speech is broken through, while in the latter this network is not touched, so that the subcortical motor-aphasia means a pure aphasia, an exclusive destruction of outer speech, a mere "word-dumbness." In the same manner the cortical sensory aphasia differs from the subcortical, pure "word-deafness." The difference in the various forms of the motor and sensory aphasias, according to whether the given lesion occurs in the cortical centre itself, or below it in the white matter, was the result of much study devoted to the problem of speech disturbance by Dejerine, Ross, Kussmaul, Charcot, Lichtheim and others in the decade following Wernicke's publication.

The symptomatology of the four chief forms of aphasia which we have mentioned above is as follows:-

I

CORTICAL MOTOR APHASIA—BROCA'S APHASIA.

The patient has either lost completely the faculty of speech or has retained a few stereotyped expressions; or on the other hand, in mild cases, he has retained a certain rudimentary expressive speech ability, so that he is able, for instance, to employ all words in the infinitive (Negro style), or omits (telegraph style.) Along with this loss, or say impairment of speech, the

writing is disturbed in a corresponding degree of intensity. The ability to copy may be retained, as a sketching of the letters, which occurs without the co-operation of the cortical memory ability. Reading is always much less impaired and it often requires special methods to make this disturbance evident, so that, for instance, printed words may be understood, written ones on the other hand, not; or when one separates the syllables and arranges them with horizontal or vertical intervals, as can be done by means of well-known alphabet games of children. The speech understanding appears "en gross" to be undisturbed. When one, however, speaks with the patient very rapidly, or employs in the conversation complicated sentences, a certain difficulty of speech understanding becomes apparent. When, therefore, a disturbance of speaking and writing, although standing very much in the foreground, is due to a destruction of a nodal point of the cortical association network, the reading and speech understanding are not absolutely spared. To Dejerine is due the credit of having called attention to these latter points.

II.

SUB-CORTICAL MOTOR APHASIA—PURE WORD-DUMBNESS.

Here the tract between Broca's centre and the centre for the muscles concerned is destroyed. The inner speech, reading, writing, and speech-understanding are intact, although the patient cannot utter his words. He has, however, in contradistinction to the patient with Broca's aphasia, retained the corresponding motor memory pictures. He is able, therefore, to indicate with his fingers the number of syllables in a given expression, but attempts in vain to speak. (Dejerine-Lichtheim phenomenon.)

III.

CORTICAL SENSORY APHASIA—WERNICKE'S APHASIA.

Here the understanding of speech is destroyed or impaired. When merely impaired, it is the common modes of speech (how are you? What is your name, etc.) the sense of which the patient is still able to get. At times the patient also gives the meaning of a sentence according to a certain characteristic word which he understands; if, however, we vary the sense of the sentence by omitting this characteristic word, the corresponding

modification by the patient is lacking. Example: Have you any children? Yes. How many children? Yes. Where are your children? Yes. The voluntary speech is retained.

In contradistinction to the motor aphasic, who speaks little or nothing, the patient with Wernicke's aphasia speaks, as a rule, very much, but badly. He misplaces words (verbal paraphasia); says, for instance, dog instead of bed; or he may misplace only letters (literal paraphasia), for example, Ferstel instead of Fenster; or lastly, he produces a sort of gibberish (jargon aphasia); instead of saying "Heute geht es mir viel besser," he says, "Heute heu geht heu viel bersen." In the last sentence I wish to call your attention to the clinging to, the perseveration on the syllable heu, a very frequent manifestation in paraphasia.

The understanding of writing is likewise either completely destroyed, or impaired in cortical sensory aphasia. In complete word-blindness the patient can no longer read, and the letters are to him nothing more than black figures on a white background, which he is, however, able to copy. Writing (either voluntary or from dictation) is, on the other hand, lost or impaired (the latter in the form of a literal or verbal paraphasia). Other symbols than letters, these patients occasionally understand; for instance, very frequently ciphers. Furthermore, they are frequently able to play cards and dominoes. One of Dejerine's patients who could not understand the letters RF, said at once, "République Française," when these two letters were shown to him encircled by an escutcheon.

IV.

SUB-CORTICAL SENSORY APHASIA—PURE WORD-DEAFNESS.

In this very rare form, of which I have not yet seen a case and the knowledge of which we owe to Dejerine, Wernicke, Lichtheim, Liepmann, Pick, Sérieux, Sachs, Bastian, Ziehl, and others, the inner speech is intact. Reading and writing are undisturbed and the only thing lacking is speech understanding.

Aside from this, there is not present in word-deafness, paraphasia, because the sensory cortical centre is still able to exercise its exciting and controlling influence over the motor centre. This form develops, therefore, only through the shut-

ting off of the otherwise intact Wernicke's zone from the stimulations of the general hearing zone. Liepman, Dejerine, Van Gehuchten and Goris, have brought forth the anatomical proof, as was postulated by Wernicke, that a subcortical lesion of the left temporal lobe may be the substratum of pure word deafness.¹

Along with these four main groups of aphasia there have been described a number of different forms of aphasia, into a detailed discussion of which I will not enter here, because, in the main, they are not of practical importance. I will, however, say a few words concerning them:

(a) CONDUCTION APHASIA.

Wernicke thought that certain speech disturbances which were characterized only by paraphasia, paragraphia, and impairment of repeating, were due to an interruption of the direct connections between the sensory and motor speech centres. It concerned therefore especially a lesion of the insula. Pershing, Von Monakow, Niessl von Mayendorf, and others however, have shown the falsity of this clinico-anatomical hypothesis.

(b) THE transcortical APHASIAS.

These, according to Lichtheim, develop on account of a blocking of the tracts between the ideation centre on the one hand and the Broca and Wernicke centres on the other hand; accordingly we differentiate a motor and a sensory variety. In the first the voluntary speech and writing are destroyed or impaired; repeating, reading aloud, and writing from dictation, on the other hand, are retained. In the second there exists more or less of word-deafness and alexia, along with paraphasia or paragraphia, but the repeating, reading aloud and writing from dictation are possible, although without understanding the meaning. Dejerine is of my opinion, that these forms are to be considered only as intermediary stages of cortical aphasia which is undergoing improvement. Monakow and Sachs, likewise, do not believe in the transcortical aphasia as an autonomous form, while Heilbronner and Rothmann at least, believe in the motor variety. Rothmann on the strength of a single autopsy finding by Liepmann, considers amnesic aphasia, i. e., verbal amnesia, which was studied more thoroughly in

1898, by Pitres, as an attenuated form of transcortical aphasia in which finding of the words is very difficult; the given word, however, is recognized correctly and unmistakably; furthermore they are especially unable to find substantives and verbs for concrete things, whereas forms of speech, flexion and declination are retained.

(c) THE ISOLATED SENSE APHASIAS.

The best known form of this is the optical aphasia of Freud.

The patients cannot describe simple objects when these are shown to them, but they promptly appear when the patient is given opportunity to gain cognizance of the object by means of senses other than the visual one; for instance, to touch a spoon, to hear a bell, to taste a piece of sugar. This disturbance depends upon destruction of the connections between the centres for the recognition of objects in the occipital lobes and Wernicke's centre in the temporal lobe for the clang or sound pictures. G. Wolff, however, doesn't believe in the existence of optic aphasia, as well as of any analogous isolated sense aphasias, as the acoustic and tactile aphasias. As a matter of fact many of these observations still lack the evidence that the patients actually recognized the objects seen, touched and heard, but were not able to find their names, therefore they were free from soul-blindness, soul-deafness and tactile agnosia.

Let us enumerate further, in short, a few other symptom complexes:

(1) *Alexia*, which in milder cases consists only of blindness for letters, in severer cases in blindness for words, may, aside from being associated with cortical aphasias, exist more or less independently. In the event of a lesion in the reading centre in the left angular gyrus, the *alexia* associates itself with *agraphia* (cortical *alexia*) because the association fibres to the centre for the writing movements in the precentral convolution are interrupted. If the lesion, on the other hand, is subcortical, under the angular gyrus, so that only the optical word pictures which come from the visual cortex in the cuneus are blocked, we have a "pure *alexia*," (in most instances combined with a right-sided homonymous hemianopsia, because the optic radiations go through beneath the gyrus angularis.)

Therefore conditions which are more or less completely analogous to these obtain in the cortical and subcortical aphasias of both motor and sensory nature.

(2) *Agraphia*:—The destruction of the writing center does not produce an isolated agraphia but a paralysis of the right hand. With the left hand, however, such a patient will be able to write or will quickly learn to do so, provided his Broca, Wernicke, and reading centers have remained intact. Isolated agraphia we will find later as a concomitant manifestation of apraxia.

(3) *Amusia*:—Under this we have to differentiate a motor form, i. e., an inability to sing; a sensory form, i. e., an inability to understand or to perceive music; and a musical alexia, i. e., blindness for musical notes.

Amusia is a rare concomitant of the corresponding aphasias. There is a good deal in Dejerine's conception that the musical centers are very closely located to the corresponding speech centers.

(4) *Amimia*:—The condition in which the patient also loses the sign language, "motor amimia," and even loses the understanding of signs, "sensory amimia," is present in total aphasia. When in this way all manner of understanding fellow men is lost, we speak of it as *asemia* or *asymbolia*.

After I have given you the prevalent conception of aphasia in general, you will be interested to know of the modifications of the aphasia question which have been of late proposed by various neurologists.

In the first place I will discuss the works of Pierre Marie, in which he endeavors to overthrow the former conceptions of aphasia in a very revolutionary manner. First of all, he objects to a dual division of the aphasic symptom complex, in so far as he only recognizes one speech center, viz: Wernicke's, the limitations of which, however, he enormously extends so as to include the gyrus supermarginalis, the upper and middle temporal convolutions and the angular gyrus. He does not, however, give to this center the meaning which Wernicke attributed to it, viz: as a gathering center for the clang or sound pictures, but as an "intellectual center," in which the sum total of all psychic mechanisms which are essential for speech, are

located. We can, therefore, find in every case of cortical aphasia, even in the Broca type, an alteration of this extended Wernicke's zone or in the fibre tracts which emanate from it, just the same as clinically, we can always find more or less perceptive disturbances in the so-called Broca's aphasia. A change in this extended Wernicke's region is therefore present in every cortical aphasia. If, however, the lesion remains localized to this centre, we have word-deafness along with paraphasia; if, on the other hand, such lesion is complicated with destructive changes in the insula, the lenticular nucleus, and the external capsule—on the left side (the lenticular zones)—then we get in addition to the foregoing, a new element, anarthria, and this latter element is what gives to the aphasia the character of a Broca's aphasia. He says, further, a patient with a Broca's aphasia, is a patient suffering with Wernicke's aphasia, who cannot speak. Broca's convolution is not at all essential for the occurrence of an aphasia. Its frequent concomitant destruction is only accidental owing to the relations of the distribution of the blood vessels. Therefore, what was formerly described as pure motor or subcortical aphasia occurs through a lesion of the lenticular zone without the involvement of Wernicke's centre. It therefore does not merit the name of aphasia, but simply anarthria.

The subcortical sensory aphasia, or pure word-dumbness, Marie does not recognize at all. On the other hand, he acknowledges the existence of a pure alexia which is usually associated with hemianopsia; although he does not believe in the significance of the gyrus angularis as a reading centre.

Let us now sum up the views of Marie and those of his follower, Montier, by means of Fig. I. (See end of article.)

First. Lesions in the zone A are unimportant as far as speech is concerned, although this zone contains Broca's convolution.

Second: Lesions in the zone B (lenticular zone) produce anarthria, i. e., the symptom complex which has been always recognized as the subcortical motor aphasia or the pure word-dumbness.

Third:—Lesions in the zone C, (the extended Wernicke's centre with the fibres leading to it) show aphasia, i. e., the

clinical picture which has usually been described as Wernicke's or cortical sensory aphasia.

Fourth:—Destruction of the white substance (mark) of zone D may produce pure alexia (usually accompanied by hemianopsia), a picture usually described as the subcortical alexia.

Fifth:—If a lesion B becomes associated with a lesion C, then we have the Broca's aphasia, as a combination of anarthria and aphasia.

As far as the Marie theory is concerned, its great simplicity of course deserves praise; we cannot, however, agree with his conceptions of aphasia, if we shall employ as proof our material on hand. Besides, the most prominent men in this field, such as Dejerine, Liepmann, Heilbronner, and others, do not agree with Marie. However, as is often the case, Marie's teachings, ephemeral as they are, caused a great stir in the definitions of the mass conceptions of aphasia. The aphasia question was at the time in a stagnant condition, and discussion of its dogmas, such as Marie's work caused, could only be received very willingly, and as a matter of fact Marie and Montier have brought forth arguments from the general literature on aphasia which, although explained by them in a sort of arbitrary manner, yet were sufficient to cause those who are really interested in the aphasia question to seek a thorough explanation of them.

I will mention only four of the most important points which they have brought out:

First:—Along with Broca's aphasia there exists minor disturbances of the understanding of speech and writing, although one needs special means to demonstrate such disturbances. This is not generally acknowledged, but I can only substantiate the results on the point brought forward by my teacher Dejerine.

Second:—That pure subcortical aphasia has certain relations to the condition which in general neurological nomenclature is designated as "anarthria" or "dysarthria," cannot be denied. This was already recognized before Marie called attention to it, thus Oppenheim said, this condition (pure subcortical aphasia) forms, in a measure, the bridge between aphasia and dysarthria; and Koenig has shown that dysarthric disturbances

occur in subcortical motor aphasia. The thing, however, which must be considered strange in Marie's conception, is that he not only sees a close connection between anarthria and pure word-dumbness, but considers them as identical things; against which we must decidedly protest.

The anarthric speech, i. e., the disturbance of sound formation, depends upon an alteration of the neurons which preside over the speech muscles; in bulbar paralysis, in consequence of nuclear lesions; and in pseudo-bulbar paralysis, in consequence of supra-nuclear lesions. The latter, however, must be bilateral, and not only left-sided, because all the muscles which enter into the specific function of speech are innervated by both hemispheres. At which point, however, of the cortical nuclear tracts the bilateral interruption exists, (whether in the operculum, the centrum semi-ovale, the inner capsule, cerebral peduncles, or in the pons) is immaterial to the development of anarthria, or its lighter form, dysarthria. The anarthric speech is dragging, monotonous, at times aphonic; whereas the formation of vocals is less impaired, the consonants are pronounced badly and with great effort, so that in some cases speech becomes unintelligible. Often shortness of breath occurs when speaking and many times additions are needed for the completion of a sentence (chopped off, sort of semi-explosive speech). According as to whether the paresis of the lips or of the palate predominates, the disturbance will affect the formation of labials or nasals.

In the pure motor aphasia, on the other hand, with the retention of inner speech, the difficulty does not lie in the formation of sounds, but in the development of words out of the single sounds, in which often a great number can be brought forth as word fragments, and then likewise they are "checked." If Marie wanted to use for this disturbance another expression than aphasia (for which latter he held the inner speech as integral criterion) then it would have been much better for him to have used the term "aphemia," which had already been used by Bouillaud.

Third:—There exists about sixty cases of Broca's aphasia in which all the clinical signs of this symptom complex were found, the autopsies of which gave no evidence of a lesion in

the third left frontal convolution. In order to show that such cases are less paradoxical than would appear, it suffices to call attention to the following facts:

(a)—There may exist, as Mingazzini has especially shown, changes determining aphasia which can only be revealed microscopically, for instance, senile cortical atrophies; and there can be no doubt, that even to day, in spite of Dejerine's request not to recognize as arguments any case of aphasia, the brain of which had not been completely studied serially by microscopic sections, such histological alterations are frequently overlooked. In this connection it should be remembered that there exist functional aphasias, among which hysterical aphasia has of late again been subjected to a very critical study by Marinesco.

(b)—It is very probable that Broca's centre is not limited to the front of the third left frontal convolution, but also spreads to the neighboring parts of the insula, second frontal convolution, and the gyrus praecentralis (Bernheim, Fouche, Stewart). Niessl von Mayendorf even suggests that the cortical motor centre should be placed in the lower part of the precentral convolution.

Fourth:—There exist about thirty cases in which Broca's centre was destroyed and in which, clinically, there was nothing manifested which could be considered as aphasia. On this account, however, we need not entirely overthrow the Broca-Wernicke localization theory. The following reflection suffices:

The left-handed person has his speech centre, as Broca already called attention to, on the right side; at the same time however, he has seen left-handed persons develop motor aphasia following destruction of the left lower frontal convolution; similarly, the left-sided cortical localization of the psychic speech mechanism in right-handed individuals is a rule which admits of some exceptions, and one need not, therefore, wonder that certain right-handed individuals fail to develop aphasia following the destruction of the left lower frontal convolution. They were merely the exceptional cases in which the speech faculty centres were located on the wrong side. We must also remember that an original double-sided predisposi-

tion of this cortical sphere must be assumed with great probability (Mingazzini and others). The destruction of Broca's convolution, besides, may have caused originally an aphasia from which the patient, however, eventually recovered; so that the one performing the autopsy, if he is not in possession of an exact anamnesis, will easily record the case as a lesion of the foot of the third frontal convolution without aphasia.

We have mentioned here for the first time the question of recovery from aphasia, a manifestation which is being explained usually on the strength of a vicarious assumption of the function by the opposite side (to a certain extent "reserve centres") which, however, according to the newer work of von Monakow, has an altogether different significance, and which should be considered much more than it is when discussing the question of aphasia.

The teachings of Monakow have for their aim, similarly to Marie's teaching, the dethronement of Broca's centre from its dignity as a depot for kinesthetic speech pictures. It takes, however, more cognizance of the facts previously reported and it can be easily considered as only a modification of the Broca-Wernicke conceptions. Monakow requests more attention to the dynamic factor as compared with the anatomic one in establishing facts in the aphasia question. He supports himself by the "diaschisis theory," which he represents. The latter theory assumes that when a certain portion of the brain is destroyed its own function alone not only ceases, but there occurs a sort of shock-like inhibition upon the other cerebral spheres with which that centre might be in connection. This shock is not, however, to be taken as something active; the cessation of stimulation in the destroyed centre means a passive inhibition of those parts of the brain which depend for their activity on those stimulations which have ceased to occur. This new condition, however, suddenly throws them out of function. This "diaschisis" phenomenon is transitory in its effects. In Broca's region (the margins of which, the Zürich neurologist extends further than that of the classical conception) there lies an important causative point of motor aphasia not, however, a definite speech centre. The Broca's cortical sphere controls the synergetic function of the articulatory

mechanism in the sense of a dirigent; the definite elaboration of speech, however, is brought by cortical spheres which are located in large regions of both hemispheres. Therefore pure (predominantly traumatic) lesions of Broca's zone show only a temporary motor aphasia, and in the restitution of actual speech function in such cases nothing else could be seen except the disappearance of this "diaschisis phenomenon." The cortical apparatus concerned in a given "diaschisis" is also able to learn to functionate with or without the supervision of Broca's centre. On this dynamic factor Bernheim of Nancy lays just as much stress as on the material lapsus depending upon anatomical lesions. Besides this he assumes that the so-called centres which serve for the speech mechanism are in nowise depots for the kinesthetic auditory and visual memory pictures, but merely intersecting points of a complicated system of tracts which spread themselves between the association centres in the frontal lobes, the sensory centres in the temporal and occipital lobes, and in the motor nuclei concerned in this function.

Certain points of contact with Bernheim's conception can be found in theory of Goldstein, who assumes all aphasic disturbances to be the product of multiform lesions of a single great association sphere. Goldstein's conceptions, however worthy as they are from a psychological standpoint, fail to recognize sufficiently the anatomic and the topical diagnostic side of the aphasia question, to be accepted by us.

You will, therefore see, gentlemen, that we may adhere to the theories of Broca and Wernicke without accusing ourselves of being behind the times. As unmodifiable dogmas, of course, we need not consider them, but as basic ideas upon which much work has been done and must be done in the future. We will, however, have to neglect the bare diagnoses of the sort of the well-known Wernicke-Lichtheim scheme, which are still found in many text books, and which have been constructed from insufficient anatomic and clinical foundations.

We will now consider, in brief, the diagnosis, prognosis and therapy of aphasic disturbances.

I will not describe here the entire technique of the exam-

ination of an aphasic; you will find excellent guides, among others, in Dejerine "*Sémiologie de Système Nerveux*" and P. Stewarts "*Diagnose der Nerven Krankheiten*;" a concise yet complete summary in Cimbals "*Taschen-buch zur Untersuchung Nervöser und Pyschischer Krankheiten*." I would like, however, to call attention to the necessity of trying to come to as rapid as possible a diagnosis concerning the form of aphasia which we have before us without entering first upon the study of the ever-so-interesting symptomatologic details; for this purpose I recommend to you the following scheme:

SPEECH UNDERSTANDING DIAGRAM.—(Sec end of article).

I do not consider here, at all, the problematic "conduction aphasia," and I have included it because of its slight practical significance in differential diagnosis with the so-called "transcortical aphasias."

Concerning the prognosis of aphasia, I will omit the discussion of the etiologic factors, (i. e., whether it was hemorrhage, tumor, embolism, trauma, etc.), for reasons which are obvious. It is likewise illuminating that the intellectual status is of great prognostic significance, and that a developing dementia makes the hope for recovery from an aphasic disturbance a mere illusion. Especial mention, nevertheless, should be given to the prognostic differences, "*quoad restitutionem functionis*," which seem to exist according as to which form of aphasia and its underlying anatomical destruction we are dealing with. The best prognostic prospect is given by pure word-dumbness, while the several cortical aphasias (with the complete loss of verbal and written speech) give very little hope for improvement. In the sensory aphasias the prognosis is the worst—the more pronounced we find pressure of speech, the more intensive the paraphasia, and jargon aphasia is developed. Alexia and agraphia show themselves much more refractory in the improvement of a Wernicke's aphasia than in that of word-deafness.

Gutzmann of late has brought forth a few important points concerning the practice therapy of these conditions. He warns first, very emphatically, against the beginning of practice too early. One should wait at least a half a year after the disappearance of the active manifestations, and the

complete recovery from all other disturbances. If one commences to practice too soon, there is great danger of the development of a new hemorrhage during the practicing and exertion. Gutzmann, as a rule, commences the "practice cure" only when, say after a year or two, no spontaneous improvement of speech occurs. If one commences this treatment sooner it is very difficult to tell how much of the improvement is due to this treatment. This extraordinarily sincere and carefully considered point of this experienced speech specialist deserves general recognition. Gutzmann further lays stress upon the very slow progress in this therapy, because only then we may succeed in keeping the patient in good humor, upon which the success of the treatment depends so much.

Sensory aphasics with pressure of speech must at first practice to keep their mouth shut, to restore in a measure, the normal inhibition by means of their own will. Even in the most severe prognostically unfavorable Broca's aphasias one should not neglect the treatment, because it is of the utmost significance to a patient to give him the ability to express his wish at least by means of a few words, though these may be used ungrammatically. Through this the emotional instability of these patients is, to a certain extent corrected—a very important thing—because their emotional "upsets" not infrequently reach the stage of maniacal outbreaks. Because the aphasiac cannot give expression to his thoughts, wishes and ideas, there develop inner tensions, for which even a certain rudimentary speech faculty would give a means of outlet. We must, also, for the same reason and purpose, train these patients in a systematic development of the sign language. A picture book with simple pictures of the ideas and wishes of the patient should always be in his possession, so that he may also make his wishes known to those about him by means of pointing gestures, when he is unable to do so by means of descriptive gestures, on account of an existing apraxia.

Let us now turn to the discussion of the question of apraxia which we have mentioned several times thus far, but which we have not defined.

At the time when Lissauer and Wernicke occupied them-

selves with the symptomatology of the agnostic phenomena, (soul-blindness, soul-deafness, tactile agnosia) the expression "apraxia" was used to denote the perverse acts to which certain patients were subject, because of not recognizing the objects of their environment. Since the last decade, however, owing to the monumental work of Liepmann, this expression changed its significance.

To-day we denote as apraxia, a disturbance in which the extremities, and especially the hands, are able to perform correct single movements, but unable to execute definite purposive movements. Such a patient has lost the memory of the necessary synergias and combinations of single movements for the purposeful use of scissors, for winking, salutation, etc. He puts the tooth brush in his mouth in the manner of a cigar, etc. Apraxia, therefore, has many analogies with motor aphasia, or in other words, aphasia can be considered from the physiological standpoint as a special kind of apraxia, as the apraxia of the speech tools.

Through the works of Liepmann, Heilbronner, Pick, von Vleuten, Goldstein, Hartmann, Kleist, Margulies, Bonhoeffer, Rose and others, the apraxia theory has assumed the form which I will describe briefly to you now.

Let us mention in passing, a few expressions used by the various authors to denote apractic phenomena in the sense of Liepmann, which in no wise, however, have come to stay. Thus Heilbronner and Meynert used the expression "asym-boly," De Buck, "parakinesia," Dupray, "paraectropia."

Apractic disturbances may occur under three different circumstances.

The scheming of the ideas for the execution of acts may be disturbed so that the picture of purposeful behavior simulates that of a person in a high grade of confusion.

Liepmann cites the following typical examples:—The patient puts the match in his mouth alongside of his cigar. In putting the seal on a letter he brings the seal into the flame and then puts it on the stick of sealing wax. He endeavors to cut off the end of his cigar by catching it between the box and its cover. The various isolated acts necessary for the perverted actions, are, aside from this, quite correctly done.

This form of apraxia is called "ideational apraxia." As a rule it becomes manifest only in complicated movements, and in proportion to the difficulty of such movements. The extremities are, as a rule, equally affected. The question here is, not that of an incorrect carrying out of the will, but of perverted impulses of the will being received by the extremities.

(2)—The release of movements and the centre for the various members may on the other hand remain intact in so far as retaining the kinesthetic memory pictures is concerned. The connections, however, between the various memory pictures may be destroyed. In that case simple acts, the execution of which is retained in the centres for the extremities may be correctly executed but they are not brought into accord correctly within larger series of movements, because the correct directions and orders from the ideational centres no more reach the extremity centres which have become more or less autonomous from the rest of the brain. We speak, in this instance, of an "ideo-kinetic" apraxia. It may affect single members of one-half the body. According to Liepmann the following forms of impairment of actions may occur:

(a) Movements which altogether fail to simulate any purposeful acts: aimless movements of hands; spreading of fingers—so-called amorphous movements.

(b) The substitution of movements may also be called *parapraxia* (winking instead of threatening; taking hold of the ear instead of the nose, etc.)

(c) The movement occurs in a different neuro-muscular section (standing erect instead of giving the hand, which may be mistaken for cessation of movements.)

(d) Often a sort of motor "helplessness" sets in, a genuine cessation of movement. In many "fail reactions" a marked tendency to perseveration showed itself analogous to that seen in aphasia.

(3) Lastly the motor innervation may be diminished through a disturbance of the centres for the extremities alone, a disturbance which does not suffice to paralyze them, but to blot out the kinesthetic memory pictures. In that case we are dealing with a motor kinetic apraxia, in which the movements of the extremities are performed in such manner as if

the patient tried them for the first time, and in consequence gross movements are performed very clumsily; finer movements, however, such as writing, threading the needle, or sewing cannot be performed at all.

The second apraxia variety, the *ideo-kinetic*, Liepmann designates as the motor apraxia *parexcellence*, while Heilbronner calls it in accordance with the terminology of the Wernicke-Leichtheim scheme, *transcortical apraxia*, and in consequence applies the name of cortical apraxia to the so-called "*glied*" kinetic apraxia. Kleist calls the latter form "*innervation apraxia*." I prefer the nomenclature used among others, by Dromard and Pascal, namely: the first one which we have described, they call the "*ideotoric*;" the second, "*ideo-motoric*;" the third, the "*motoric*" form. The scheme of examination of the latter two authors appears to me deserve preference. First, *auto-kinetic* movements—to walk, to stand up, to sit down, to dress, to undress. Second, *Simple* movements—close eyes, open mouth, show tongue, cross arms, lift right hand, put out left hand, etc. Third, movements requiring critique—show the right eye, touch the left ear, pull at your beard, scratch your head, etc. Fourth, *expressive* movements—throw a kiss, give a military salute, cross yourself. Fifth, *descriptive* movements—show how one plays piano, how one grinds the organ, how one grinds coffee, how one catches a fly, etc. Sixth, *complicated* movements—pour out a glass of water, tie a knot, light a candle, seal an envelope, etc.

In order to diagnose apraxia it is, of course, essential to rule out word-deafness, that is to establish the fact that the patient understands the commands. We must, further, exclude *agnosia*, that is, find out whether the patient recognizes correctly the various objects and does not, for instance, take a tooth brush for a cigar. One must also be careful not to mistake *ataxic-choreic* or *athetoid* movements for apraxic ones.

Concerning the anatomical substrata of the various forms of apraxia, we find *ideational apraxia* in diffuse processes, such as senile dementia, paresis, diffuse cerebro-arteriosclerosis; while the *ideo-motoric* (*ideo-kinetic*) and the *motoric*

(glided-kinetic) depend, as a general rule, upon circumscribed lesions. However, as it often occurs that along with focal lesions, diffuse processes set in, and likewise in the case of diffuse affections, circumscribed lesions may develop; this rule should, therefore, not be adhered to too strictly. At all events, we ought not to think of a definite localization for the ideomotoric apraxia. It is different with the ideomotoric and the motoric. The latter depends, as has already been said, upon mild disease processes in the cortical centres of the respective extremity, processes which are not sufficient to cause complete paralysis of such extremity, but are extensive enough to destroy its capacity for kinesthetic memory pictures. The ideomotoric or ideokinetic apraxia may be found under various circumstances. First, when the sensory motor cortex, although retaining its integrity, has been severed from its connections with the other parts of the cortex, namely: from depots of the word and object perceptions in the lenticular and occipital lobes. Therefore lesions in the parietal lobe cause apraxia in the opposite hand. Second, apraxia of the left hand may be present when its sensory motoric cortical region in the right hemisphere, although remaining intact, is robbed of its connections with the sensory motoric cortical spheres of the left hemisphere. The left hemisphere deserves a greater dignity (at least in right-handed individuals) from the fact that its sensory motor area also controls the activity of that of the opposite side. This control is exercised by means of commissural fibres which lie in the corpus callosum. In consequence thereof, a left-handed apraxia develops in the presence of focal lesions which split callosal fibres. Whether the interruption lies in the callosum itself or in one or both hemispheres, makes no difference. Therefore, a lesion in the left centrum ovale, by destroying the pyramidal fibres, will not only cause right-sided hemiplegia, but also a left-handed apraxia, inasmuch as it destroys the interhemispheric commissural fibres and thereby robs the right sensory motor cortical region of its supervision by the left one.

We will further mention, in conclusion, that alongside of the gross apraxic symptom complexes, there also occur certain special apraxic disturbances, such as apraxia of closing

the eyelids (Lewandowsky), the apraxia of the muscles of the head (Rose), the apraxic agraphia (Heilbronner, Maas, Semi-Meyr, Kleist, Liepmann), which in contradistinction to the aphasic agraphia, may occur isolated. To those special ataxic disturbances belong unquestionably also the disturbances of sign speech, which Grasset observed in a deaf mute. Charcot's instrumental amusia, in which the patient lost exclusively the knowledge of the movements required for the handling of his instrument, also belongs here. Similar cases of von Würtzen and others as well as the amimia, which has been mentioned before, should also again be mentioned here. In the short space of time of its development, the study of apraxia has shown such a mass of extremely valuable diagnostic psychological and physiological data that we look forward with great anticipation to the further elucidation of this chapter of neurology.

LITERATURE.

- Bastian, C. British and Foreign Medical Chir. Review, 1869.
- Bernheim, F. De l'aphasie motrice. Thèse de Paris, 1900. Sem. Méd. 1906. Nr. 45.
- Bernheim, H. Rev. de Méd. 1908. Nr. 9.
- Bouillard. Arch. gén. de Méd. 1825. Acad. de Méd. 1848.
- Broca, P. Bull. Soc. Anat. 6, 1861. Bull. Soc. Anthropol. 1863. Page 200, 1864, page 213, 1865, pages 362 and 377.
- Charcot, J. M. Leçons du Mardi. Paris, 1888.
- DuBuck, D. Journ. de Neurol. 1909, 20, Sept.
- Dejerine, U. Rev. Neurol. 1906, Nr. 13. Presse Méd. 1906, Nr. 55, 57, 92. Encephale, 1907, Nr. 5.
- Dejerine, J. et Thomas, H. Rev. Neurol. 1904, Nr. 13, 15.
- Dromad, C. et Pascal, Mlle. Presse Méd. 1909, Nr. 31.
- Freud, S. Zur Auffassung bei Aphasie, Wien, 1891.
- Goldstein, K. Journ. f. Psychol. u. Neurol. 11, 1908. Neurol. Zentralbl. 1909, Nr. 17. Beiheft zur Méd. Klinik, 1910.
- Gutzmann, H. 16 Internal Medical Congress. Budapest, 1910. Sekt. 2, (Neuro-pathol.)

Hartmann. Monatsschr. f. Psych. u. Neurol. 1907, Febr. März.

Heilbronner, K. Zeitschr. f. Psychol. u. Physiol. des Sumes Org. 39, 1905, s. 161. Munch. Méd. Woch. 1906, Nr. 39.

Kleist. Jahrb. f. Psych. u. Neurol. 28, 1907, H. 4.

Knauer, A. Klin. f. Psych. u. neu. Krank. 4, 1909, H. 2.

Ladame, P. L. Presse Méd. 1906, Nr. 3. Lichtheim, Arch. f. Klin. Med. 1884.

Liepmann, H. Monatsschr. f. Psych. u. Neurol. 1900. H. 7, 8, 9, Arch. f. Psych. 38, 1904, H. 1, Über Störungen des Handelns bei Gehirn-Kranker, Berlin, 1905. Monatsschr. f. Psych. u. Neurol. 1905, H. 4, 1906, H. 3--Neurol. Zentralbl. 1909, Nr. 9.

Liepmann, H. u. Moss O. Journ. für Psychol. u. Neurol. 10, 1907, S. 214.

Lissauer, H. Arch. of Psych. 21, 1890, S. 222.

Maas, O. Neurol. Zentralbl. 1907, Nr. 17.

Margulies, A. Wiener Klin. Woch, 1907, 18, April.

Marie, P. Sem. Med. 1906, Nr. 23, 42, 48. Presse Méd. 1907, Nr. 4.

Marinesco, G. Sem. Méd. 1909. Nr. 26.

Meyer, S. Zentral. f. Nervenheilk. u. Psych. 1908, Sept.

Mingazzini, G. Rev. di Pat. Neu. e. Ment. 15, 1910, Fasc. 3.

Merallie, Ch. De l'aphasie Sensorielle, Thèse de Paris, 1896.

Monakow, C. v. Korresp. Bl. f. Schw. Ärzte. 1909, Nr. 12. Deutsche Mediz. Woch. 1909, Nr. 37, 38, Intern. Med. Konger. Budapest, 1910. Sekt. 11 (Neuropathol.)

Mott, F. W. Arch. f. Neurol. III, 1907, p. 401.

Moutier, F. L'Aphasie de Broca. Thèse de Paris, 1908. Ga. des Hot. 1908, page 1239, 1275.

Niessl, v. Mayendorf. Arch. f. Psych. 44, 1908, H. 3. (Neurologen-versammlung, Baden-Baden)

Pick, A. Studien Über Motorische Apraxie, Wien, 1905.

Rose, F. Encéphale. 1907. Sem. Méd. 1908, Nr. 17.

Sachs. Gehirn u. Sprache, Wiesbaden. 1905. Societe de Neurologie da Paris, L Localisation de l'aphasic. Motrice, Rev. Neurol. 1908, No. 18.

Van Vleuten. Allg. Zeitschr. f. Psych. 44, 1907, H. 2-3.

Wernicke, C. Die aphasche Symptomen-Komplex. Breslau, 1874. Arb. a. d. Psych. Klin. in Breslau, Leipzig, 1895. Monatsschr. f. Psych. u. Neurol., 1903, H. 4.

Wolff, G. Klinische u. Kritische, Beiträge zur Lehre von den Sprach. Leipzig, 1904.

Würtzen, C. H. Deutsche Zeitschr. f. Heilk. 24, 1903, H. 5-6.

LEHRBÜCHER.

Bing, R. Kompendium der topischen Gehirn- u. Rückenmarks diagnostik, Berlin, Wien, 1909.

Dejerine, J. Semiologie du Systeme Nerveux, Paris, 1901.

Dupré, E. Psychopathies Organiques in Traite de Pathologie Mentale, Publie par Ballet, Paris, 1903, p. 983.

Liepmann, H. Normale u. pathologische Physiologie des Gehirns; in Lehrbuch der Nerven Krankheiten. herausg. v. Curschmann, Berlin, 1909, S. 395.

Oppenheim, H. Lehrbuch der Nervenkrankheiten, 5 Aufl. Bd. 2, Berlin, 1908.

Stewart, P. Die Diagnose der Nervenkrankheiten, Deutsch von K. Hein, Leipzig, 1910.

Wernicke, C. Grundriss der Psychiatrie, 2 Aufl. Leipzig, 1906.

Diagrams follow.

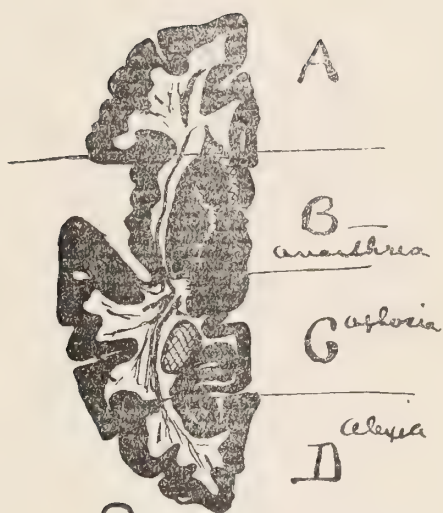
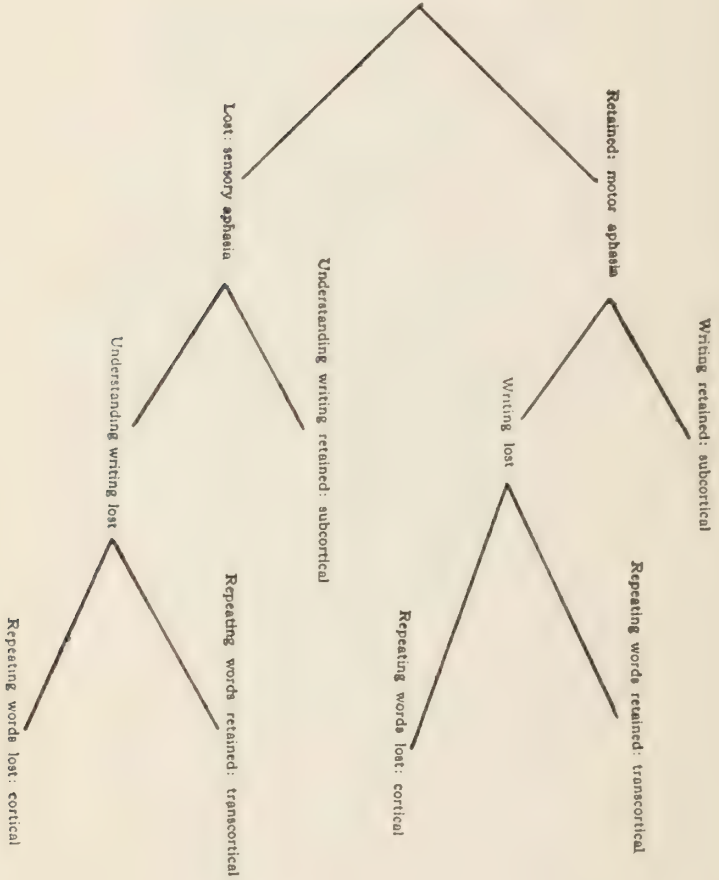


Fig. I

Schema for Marie's
Aphasia hypothetis

SPEECH UNDERSTANDING



SELECTIONS.

PSYCHIATRY.

THE PSYCHOLOGICAL AGE.—The introduction of the Binet or some similar test, especially in institutions for backward children, has familiarized us with the distinction between what may be called the psychological age and the actual physical age of a child, or for that matter even of an adult. There is a normal rate of mental development which may be far behind that of physiological growth. The National Educational Association proposes that this distinction shall be recognized by law, and that the compulsory educational child labor laws be amended accordingly. The text of its resolution adopted at San Francisco in July last, is as follows:

Realizing the fact that a large percentage of children, whose physical and mental peculiarities require special methods of education, are still to a great extent outside the scope of the compulsory education laws, and that the presence of the exceptional child in our modern civilization constitutes a problem of the greatest import, it is the sense of this association that the compulsory education laws of states and communities should be so amended, developed and extended, that they shall apply to all children of school age, without exception, and provide for their training; further, that the laws should recognize the difference between the chronological age of a child and his maturity and that the school age limit of each individual child should be determined by requiring the child to meet physical and mental tests, even though the child be in years above the age standard; in other words, a child's actual age should be determined by physio-psychological data corresponding to the normal standard

for the age limit required by law. All children or persons failing to meet such maturity test at the extreme school age limit should remain under public supervision and control, either until they reach maturity, or permanently. The same principle should be the guide in determining whether a child is fit to be employed in any occupation. Not when a child is fourteen or sixteen years of age, but when he possesses the maturity of body and mind proper to a normal child of that age, should he be released from the guardianship of the state or the community. Child labor laws should be so modified as to meet this requirement.—*Educational Quarterly*.

HOW TO REGARD HYPNOTISM: ITS THERAPEUTIC AND MEDICO LEGAL ASPECTS ACCORDING TO BABINSKI.—(By Henry Meige, *Revue Neurologique*, January 15th, 1911.)

The study and use of hypnotism has of late years fallen into disrepute. Babinski, who revised the original doctrine of hysteria and gave a new definition of it, has lately published his view of hypnotism. At the time when hypnotism was the order of the day, the school of the Salpetriere regarded it as a kind of an induced neurosis, closely related to hysteria. The hypnotist was to produce in the subject an attack of sleep, that is, the equivalent of an attack of hysteria. They supposed that they had discovered a certain number of somatic signs, considered as signs of true hypnotism, namely, neuro muscular excitability and plastic catalepsy. Charcot believed it absolutely impossible to simulate these characteristics which seemed to him wholly independent of the will of the subject. These symptoms constituted the "great hypnotism" and it was admitted that if all hysterical patients were not hypnotizable, at least all hypnotics were hysterical. On the other hand the Nancy school held that hypnotism had no pathology and that all individuals are more or less hypnotizable according to their personal suggestibility. To sum up hypnotism meant to some a somatic state possessing well defined characteristics that could be induced artificially among hysteric subjects; others regarded it as a natural phenomenon, common to nearly all individuals. These views led to two different conclusions: One that hypnotism was a successful therapeutic

agent in the greater part of functional troubles, but might become a criminal asset in unscrupulous hands; the other that hypnotism cured only hysterical conditions and used with discretion was not dangerous.

Why then has hypnotism fallen into disuse today? Babinski's reply to this question is as follows: First, in defining hypnotism here refers to Charcot's inclusion of at least two phases: lethargy and somnambulism, and then offers the following description: When the operator has made the subject regard fixedly a bright object, or after telling him formally to go to sleep he closes his eyes, seems unable to act, and all his limbs are inert, etc., then it is customary to say that he is hypnotized. Such is the usual observation and while the subject seems to act unconsciously, doing automatically all that is suggested to him, he is supposed to be unaware when awakened of all that has taken place in the sleep and sometimes seems to have been influenced against his will. Babinski then asks: Is this a real abnormal or is it a kind of imitation? Is it not easy for the subject to declare that he was put to sleep against his will and that he recalls neither words nor acts occurring during that sleep? By reason of the somatic signs attributed by Charcot to hypnotism it was believed that the element of fraud had been eliminated; it was also believed that by various methods a psychic disturbance of the nervous system could be produced, increasing markedly the suggestibility of the subject, and it was reasoned that as certain morbid states yield to suggestion, exaggerated sensibility indicated that such patients should be hypnotized. This sounds reasonable, if one accepts the premise; but Babinski denies any diagnostic value to the so-called somatic signs of hypnotism. Neuro-muscular hyperexcitability is not a real excitability of the muscles and nerves; were it so, pressure of the finger upon the facial nerve, for instance, should develop on the corresponding side of the face a similar contracture to that which results from the electrization of the nerve; and it does not.

True catalepsy, it was supposed, had shown specific characteristics in graphic tracings. Babinski has compared the graphic tracings of hypnotic subjects with one who, at request, simulated catalepsy and has found no difference what-

ever, and he concludes that the hypnotic state possesses no physical characteristics that the will cannot produce. His belief, however, is that there is a true hypnotic sleep, different from all other kinds of sleep, and that it is susceptible of being easily imitated, and he answers the following questions from his observation and experience: I. Can a person be put to sleep against his will? No. This he proved from patients at the Salpetriere, who, easily hypnotized at times, at others opposed an invincible will to the operator. II. Do the hypnotized lose, upon awakening, the memory of words and acts of the somnambulistic state? No. Question the patient immediately upon awakening and he may not seem to remember but conduct the query as a legal examination with adroitness some days later and the subject tells everything that has happened. III. Is the subject unconscious in the lethargic state? No. He can reply to questions put to him and imitate actions as commanded, while often some slight thing may rouse him from the sleep, so that in a measure he awakes spontaneously. IV. Does the subject in the hypnotic sleep lose all voluntary control over his actions, so that during hypnosis or after his awakening he must carry out the suggestions made? No. He may obey commands to do unusual or foolish things, but never things distasteful nor hateful to him. The critical spirit is not in abeyance; the subject is not passive; he has the power of choice and his will is strong enough even to guard the secrets that one tries to draw from him.

Babinski's conclusions are: That hypnotism, while resembling a reality, has also the appearance of a simulation. It has all the tricks of hysteria with which it is confounded. And further, hypnotic phenomena like hysterical phenomena, result from suggestion and disappear under the influence of counter suggestion—persuasion.—Dr. C. Eugene Riggs in Progress Department, *St. Paul Medical Journal*.

NEUROTHERAPY.

VENESECTOMY.—Burwinkel (Med. Klinik), considers venesection "an indispensable aid in the practice of medicine." He advocates this measure not only in cases of dilated right

heart, pneumonia, uremia, and eclampsia, but also in acute articular rheumatism, migraine, epilepsy, chlorosis, gout and furunculosis. He goes so far as to see in repeated venesections a prophylactic measure to prevent arteriosclerosis and premature senility. Even in children venesection is permissible; 10 c.c. may be withdrawn for each year of the child's age.

Even though we may not be inclined to go as far as the writer in our enthusiasm for venesection, there can be no doubt that recent work in pathology has established the value of this procedure in a variety of affections. It has been clearly shown, for instance, that in the various aplastic anemias, especially, in chlorosis, repeated small blood-lettings are one of the most certain and efficient methods for stimulating the activity of the blood-producing tissues. It looks as though we were about to see a general revival of this old-fashioned therapeutic measure, if in a degree somewhat less heroic than was formerly customary.—*New Albany Med. Her.* 11-1911.

EXPERIMENTAL BASEDOW'S DISEASE (ZUR EXPERIMENTELLEN ERZEUGUNG DES MORBUS BASEDOW).—E. Bircher, Aaran, *Zentralblatt für Chirurgie*, February 3, 1912. (*Am. Jour. Surgery.*)

Bircher has discovered that if a small portion of the thymus from a case of status lymphaticus is implanted into the abdomen of a dog the animal very promptly acquires all the classical symptoms of exophthalmic goiter, such as tachycardia, exophthalmos, tremor, lymphocytosis, enlarged thyroid and cachexia. It is not necessary to implant the thymus from a case of exophthalmic goiter (status lymphaticus and exophthalmic goiter are frequently associated) but from any case of persistent thymus. The symptoms begin as soon as 24 hours after the implantation, and in four days are pronounced. The experiments were uniformly successful in a series of five days. A photograph of one of the animals demonstrates a pronounced exophthalmos.

THYREOPARATHYREOID SECRETION AND WRIGHT'S OPSONIN.—The significance of the work of Sajous in connection with the internal secretions, notably that of the thyreoid gland,

is coming to be recognized more and more. Sajous was the first to show that what Wright calls opsonin is identical with the thyroid secretion. Despite this fact a number of European investigators, blissfully ignorant it would seem, of his pioneer work, have recently been at pains to exploit their discoveries in this field as original. Marbé, Miss Fassin and others have ignored Sajous in proclaiming their results, which have been merely confirmatory of the American investigator's discovery.

As far back as 1903 Sajous held the opinion, based upon exhaustive research and experimentation, that the secretion of the thyroid was an active factor in the process of immunization, that it took part indirectly in this process by increasing the functional activity of the adrenals (the thyroid being one of the organs termed by him the adrenal system), and, thru these organs, general oxidation and metabolism, and that the resulting increase of functional activity in the organs which produced protective substances correspondingly augmented in the blood the quantity of these substances—then known collectively as Buchner's alexins. In 1907 Sajous formally submitted his conclusion that the thyreoparathyroid secretion constituted what Wright had termed opsonin. The thyroid and parathyroid secretions, acting jointly, serve to sensitize all phosphorus laden cells, normal and pathological, and are identical with Wright's opsonin.

Wright himself, it will be recalled, said in 1904 that "the protective substances which were involved in the cure of disease were to be regarded as produced by internal secretion of unknown origin and were not elaborated by any gland."

Since 1903 Sajous has held that the thyroid secretion not only quickened metabolism, but that it also exercised direct effects while in transit thru the blood, "being endowed with antiseptic and stimulating attributes owing to the presence of iodine." As a normal result there is an increase of defensive substances in the blood.

THE TONIC EFFECT OF CANE SUGAR ON DEBILITATED HEARTS.—Physiologists teach us that wherever found—in the muscles, in the placenta, or elsewhere—glycogen is a source of carbohydrate material, which may be oxidized into

dextrose. Also, that during life, glycogen is converted into dextrose by the agency of a ferment, likewise formed in the liver, and that the resulting dextrose is conveyed away in the blood of the hepatic veins, to be consumed in supplying the muscles with energy and to maintain animal heat. An experiment by F. S. Locke (King's College, London) proves that dextrose is capable of nourishing the heart muscle in a wonderful and peculiar manner. He kept an excised mammalian heart beating for ninety-one hours after the death of the animal from which the heart had been taken. Perfusion with a solution of dextrose was carried on daily for five days, and, at the end of that time, the heart was beating so regularly that it was used by Professor Halliburton to demonstrate to a class of students. (See *British Medical Journal*, March 18, 1911, page 615.)

From this paper we learn that, owing to the extraordinary effect of dextrose, in keeping up the pulsations of an excised mammalian heart, Dr. Goulston was induced to try it as a remedy in heart disease, to strengthen and regulate the disordered movements of debilitated human hearts. He tried it in several cases, using it in the form of Glebe granulated sugar, which is said to be one of the purest cane sugars on the market. He mentions its successful use in two cases of the dilated heart of advanced age; in two cases of valvular heart disease; in a case of post-influenzal dilatation of the heart; in a case of heart strain; in a case of heart failure in tuberculous phthisis; in anemic cases with dilated hearts, and also in a case of chloroform heart.

Encouraged by Dr. Goulston's success, Dr. Carter tried cane sugar in a case of hypertrophied and dilated heart, in a woman aged 62. His experience with it is given in a paper published in the *British Medical Journal*, November 25, 1911. While she was taking the cane sugar, Dr. Carter's patient had no other medicinal treatment, except a blue pill once a week, with a dose of Apenta water to follow it in the morning. From April 22nd to 29th, she took 1 oz. of the sugar at breakfast and one at afternoon tea; total, 2 oz. daily. From April 30th to May 6th, she took 1 oz. at breakfast, $\frac{1}{2}$ oz. at lunch, 1 oz. at tea, and $\frac{1}{2}$ oz. at dinner; total, 3 oz. daily; from May 7th to May 21st, she took 1 oz. at breakfast, 1 oz. at lunch, 1 oz. at tea and 1 oz.

at dinner; total, 4 oz. daily. From May 22nd to May 28th, she took 3 oz. daily, and from May 29th to June 22nd, 2 oz. daily. She is still taking 2 oz. of granulated sugar daily, and maintaining her great improvement.

Owing to the clearness and cogency of the observations made by Drs. Goulston and Carter, their cases deserve close study. Of course, every doctor, and a good many people who are not doctors, know that cane sugar has large nutritive value. May not the instinctive devotion to tea, which is manifested by some persons, be largely due to the nutritive effect produced by the taking of three ounces of cane sugar, daily, to sweeten their tea? Probably this is the case. Hunters, soldiers making forced marches, laborers engaged in heavy work use granulated sugar with advantage. The beneficial influence of a lump of sugar eaten occasionally, in keeping up strength and preventing exhaustion after hard work, is due to the nutritive effects of cane sugar on the muscles. When the heart is overcome by fatigue from any cause, it is relieved and nourished by the ingestion of cane sugar. The medicinal use of cane sugar by persons who have dilated hearts, or even valvular disease of the heart, is an extension of the same notion.—J. J. C. in *Canadian Journal of Medicine and Surgery*.

CLINICAL NEUROLOGY.

PRESSOR-BASES OF URINE.—In *The Lancet* William Bain contributes a study of the pressor-bases found in the urine. These bodies raise the arterial pressure and are found in the urine of persons presenting high blood pressure.

One of these bases probably is isoamylamin, a derivative of leucin; another probably is p-hydroxyphenylethylamin, a derivative of tyrosin. They originate from protein putrefaction in the alimentary canal.

The influence of diet was marked. On a low diet of vegetables and fruit the quantity of the pressor-bases in the urine was lessened greatly. The addition of milk to the tea and coffee caused a marked rise of vascular pressure; and this was largely increased by eggs, still more by fish, yet still more by

chicken, and it rose yet a little on an ordinary mixed diet. In this series, base 1 thus rose from 30 mm. Hg. to 49, 116, 122, 160, and 164; base 2 rose from 3, to 6, 16, 42, 36, and 40 mm. Hg.

No relation could be traced between gout and the retention of pressor-bases. These were absent from the urine of children under fourteen, also in cases of high blood pressure, this being in part due to the low diet enjoined, but mostly to their retention in the system.—Ed. Selection, *Clin. Med.*

CLINICAL PSYCHIATRY.

DIPHTHERIA WITHOUT APPRECIABLE SYMPTOMS.—A woman patient admitted to the Danvers Mass. State Hospital for Insane, died in a few days thereafter without having presented any clinical symptoms of diphtheria, on autopsy revealed diphtheritic membrane in the larynx. "Guinea pigs injected with the organism died in 24 hours, and a pure culture of diphtheria bacilli was obtained from them. Measures adequate to prevent spreading of the disease, beyond the infection of two nurses who attended the patient, were adopted. Thus a possible epidemic was prevented by the recognition of the disease at autopsy and by the combined activity of laboratory and ward physicians. This episode with some facts concerning diphtheria bacilli carriers, remaining on the wards from the epidemic of over a year ago, will be made the subject of a medical contribution by the pathologist at an early date."

NEUROPATHOLOGY.

PSYCHIC STOMACH DISEASE (PSICAPATIC GASTRICHE).—A. Murri in *Reforma Medica*, as abstracted in Jour., A. M. A., cites some interesting cases in which an attack of "rose cold" was brought on by holding in the hand an artificial rose, or an acute attack of nervous coryza by the sight of each glacier seen in crossing the Alps. These and similar instances emphasize the psychic origin of certain affections, generally of peripheral origin, but in the predisposed liable to occur from mental

impressions alone. This is the explanation he offers for some cases of stomach disturbances and uncontrollable vomiting, saying that the stomach and intestines are just as liable to be the seat of these psychic affections as the nose. He remarks parenthetically that the practice of medicine is not a calm lake where one can lazily drift; it is rather a tossing sea where the physician has to be on the alert to keep his balance, grasping at theories to hold by and quick to seize on the true and disregard the false in each. He reports a case of uncontrollable, incessant vomiting for over two months in a man of 34 who had had business and family worries. No cause for the vomiting could be discovered; it resembled the cyclic, recurring vomiting of infants, and Murri is inclined to regard the case as the equivalent in an adult of the uncontrollable vomiting of infants. The accompanying acetonemia confirms this view, as also the absence of any known cause. The only difference was that the vomiting was incessant, lacking the cyclic character of the affection in infants. The nervous origin of the trouble seems beyond question, he thinks; the patient displayed other signs of irritability of the nervous system, tachycardia, arrhythmia, slightly abnormal temperature, and a preceding period of anorexia and defective digestion.

FORENSIC PSYCHIATRY.

RIGHTS OF THE INSANE.—A Washington state statute leveled by the sensational hysterics against these has been declared unconstitutional by the Washington State Supreme Court albeit one illegal legislator whose action strongly suggests a use of the recall differed. The case (*State vs. Strasburg* 110, *Pacific* 1020) as reported in the *Journal of the American Institute of Criminal Law*, etc. is as follows: A statute provided that insanity, idiocy or imbecility should be no defense in a criminal prosecution, and that no testimony or other proof thereof should be admitted in evidence, but that whenever, in the judgment of the court trying the same, any person convicted of crime was at the time of its commission insane, idiotic or imbecile, or was so at the time of his conviction or sentence, the court might direct such person to be confined for treatment

in one of the state hospitals for the insane or in the insane ward of the state penitentiary until he should have recovered his sanity. Under this statute, on trial for assault, the court excluded evidence tending to prove that the defendant was insane when the assault was committed. Held, the statute violated the provisions of the state constitution, that, (1) "No person shall be deprived of life, liberty, or property without due process of law," and (2) "The right of trial by jury shall remain inviolate." Three judges thought the statute unconstitutional because at the time the constitution was adopted persons who were so insane that they could not have a criminal intent were incapable of committing crime. Defendant's right to prove his insanity at the time of committing the act was as perfect as his right to prove that he did not commit it. The right of trial by jury gives the accused the right to have a jury pass upon every substantive fact going to his guilt or innocence. To take from him the opportunity to prove insanity is as much a violation of his constitutional right to trial by jury as to take from him the right to prove before a jury that he did not commit the act charged. While the legislature can provide for the punishment of some acts, regardless of the intent or want of intent with which they may be committed, there is no authority for the exercise of the power to conclusively impute an intent to commit crime to an insane person, or to withhold from him the right to prove insanity in his defense.

An insane person cannot be rendered amenable to the criminal law of the state as long as those laws have in them an element of punishment, nor can one accused of crime be branded as a felon without any consideration by the jury trying him of the question of his insanity at the time of the act. As the accused has the right to have the question of his insanity submitted to the jury, the section of the statute providing for his disposition if the court considers him insane need not be discussed. The argument that the present purpose of the criminal law is to instruct educate and reform, rather than further debase, the individual, is contrary to the fact that the element of punishment is still in our criminal law. As long as this is the spirit of our laws, though it may be much mellowed in the treatment of the convicted, in comparison with former times, the consti-

tutional rights must be given full force and effect in a trial upon a criminal charge.

The judges thought that the legislature did not intend to punish one for the commission of crime when, by reason of his insanity, idiocy or imbecility, he was not able to comprehend the quality of his act or to understand that it was wrong, but intended to minimize the evils resulting from the defense of insanity in homicide cases by changing the time and mode of trial of the issue of insanity. But as the statute left it to the discretion of the trial judge to decide whether the accused was insane, with no charge of insanity preferred against him, and an express provision that no testimony or other proof of the mental condition of the accused should be admitted in evidence, gave the accused no notice of the proceeding to adjudge him insane, nor opportunity to offer testimony or to be heard in his own defense; as the court might adopt its own procedure, free from all constitutional restraints, might counsel with experts or might act as his own expert, a judgment depriving him of his liberty on the ground of insanity might be rendered without due process of law.

If the legislature did intend to abrogate the defense of insanity, and to place the sane and the insane, the idiotic and the imbecile on the same footing before the criminal law, the act was constitutional. The police power does not warrant punishment for an act which the utmost care and circumspection would not enable the one who did the act to avoid. Deprivation of liberty is a punishment, and you cannot change the effect by changing the name. Statutes providing that a person acquitted of crime on the ground of insanity should be confined in insane hospitals have been declared unconstitutional. There is little difference between a person found guilty of crime while insane, and one found not guilty by reason of insanity, for in both cases the two facts co-exist, insanity and violation of law.

The provision that lunatics, idiots, or imbeciles, should be tried though they were mentally defective at the time of trial violates the constitutional rights to appear and defend in person, and to be informed of the nature of the accusation, as these rights are of no avail to a man bereft of reason.

One judge thought that the legislature had the constitutional power to decree that insanity should not be a defense to crime, but held this act unconstitutional because it left the question to the arbitrary announcement of the court, unaided by the only means known to our law for the ascertainment of facts in judicial procedure. The question should be determined by the jury as any other fact, and if in their judgment the accused committed the act, but was insane at the time of its commission, they should so determine, and the court should then pronounce such judgment as the law may provide. One judge thought that the law was constitutional.

SUICIDE IN THE UNITED STATES.—Dr. C. L. Wilbur, the chief statistician for the vital statistics in the United States census bureau, reports that the death rate from suicide for 1910 was 16 per 100,000 of population in the census bureau's death registration area, which comprises about one-half of the country's population and covers twenty-two states, and a number of larger cities in other states. The rate was 16.5 in 1909. There were 8,500 suicides in 1910.

California led the states with 29 suicides per 100,000 of population, while Maryland with 10.3, had the lowest rate. The rate increased in Michigan, Pennsylvania, Rhode Island, and Wisconsin, while there was a decrease in the other thirteen states.

The data for analytic study through the proportion of non-suicidal races are not available. The low city suicidal rate of New York is clearly due to the large proportion of a non-suicidal race there (the Jews). The erraband neuropaths undoubtedly play a part in the large Pacific Coast suicidal rate as well as depressions due to disillusion with local climato-therapeutic effects. The commercial strain is more intense than in the Atlantic slope or in the middle west. The large slavonic proportion of Chicago plays a big part in its preponderance over New York. The Slavs, especially the Bohemians, are a decidedly suicidal race, ranking nearly equal, as Morselli has shown, to the Saxons of the German Empire. Suicide increase may be an expression of decline in absolute religious faith, but it is no evidence of decadent civilization.

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Any Comment, favorable or unfavorable, specifically set forth, is always welcome from friend or enemy or any "mouth of wisest censure."

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EDITORIAL.

[All Unsigned Editorials are written by the Editor.]

MEDICAL EDUCATION, ORGANIZED MEDICINE: ITS INFLUENCE AND ITS OBLIGATIONS.—In his Presidential address before the American Medical Association in Los Angeles, Dr. Murphy said he could not refrain from sounding a note of warning in connection with medical education, lest we become faddists. In the medical college of thirty years ago a large percentage of the professors were "chosen for chairs" in the college faculty because they had attained some local or national reputation as practitioners; were friends or associates of one who had the organization of the new school in hand; or possessed the all-essential requirement—a sufficient amount of money

to invest in the stock or partnership. These selections were often made regardless of the professors' special knowledge of the subjects they were to teach or their ability to impart it if they possessed it. The students were forced as a requirement for graduation to sit for hours each day within the hearing of men ill informed and incapable of teaching. There were, however, many very able teachers in the colleges, though selected in this haphazard way. This condition did not exist alone in the third-class schools, but in the first and second (modern classification). To be relieved of this we all looked forward to the time when the university would take charge of medical education; when the professor or teaching head of a department would be selected because he was particularly well-informed on his subject, and could better instruct the student. The university control is here, but with what result to the student? The departmental head is now a man of world-wide reputation as an original investigator, a discoverer, laboratory expert, etc.; but as a teacher, one capable of imparting information to a student or a class in an acceptable and attractive manner, he would not, in a considerable percentage of cases, receive a grading of C in a third-class medical school (Flexner's estimate), notwithstanding his abundant information on the subject. Original investigators ride their hobbies in the class-room to the exclusion of much-needed information in their branches which the student needs more than he does the individual's special trend of thought now given him.—*Editorial from Therapeutic Gazette.*

The president and the faculty of a university should elect as teaching heads of departments men capable of imparting information with force and in such a way as to be grasped, appreciated, and retained by the student body.

There is a place and a first one for the special investigator, the discoverer, the laboratory and the original research man, but it is not in the delivery of the products of medical attainment to the student (unless he possesses special qualifications as a teacher) that the best results in medical education can obtain. The laboratory idea has dominated education for the past decade. Much of the instruction has been given from a purely scientific standpoint; the department has been con-

trolled by purely scientific men who had little or no knowledge of medical practice—often not even medical graduates—and they fail in establishing a relationship between the scientific facts and disease. The mission of the university medical department is not primarily the training of original investigators, but of educating physicians for the practice of medicine—*i. e.*, training men who can apply the scientific knowledge to the patient, who is the hub of medical education. In the first one-half or three-fifths of the medical course of the modern university, the student is not brought in contact with the patient at all, and when he enters the junior or senior class, though overflowing with isolated scientific facts, he is woefully incapable of applying his scientific knowledge to the patient. The clinical phase has been in a minor role dominated by the laboratory idea. If pure science is to be the all-absorbing topic of medical education for the first two years, then a fifth year must be added to the curriculum, which should be, preferably, an internship in a good hospital. Laboratory research, experimentation, chemistry, and bacteriology must all aid in the prevention of disease, and assist in the interpretation of symptoms, physical signs, clinical history into their pathologic entities and their etiologic factors—the only basis for rational therapeutics and the highest attainment in medicine, next to the original discovery of principles.

In order to meet the educational requirements for matriculation in the modern school, the young man is forced to keep his face in the folds of books from his infancy. He has had no opportunity to think, he is a book-stuffed, machine-made non-thinking automaton, albeit a fit and acceptable applicant, according to present requirements, from which a medical school is supposed to make a thinking medical man.

This sound logical reasoning from the practical view-point of those men of medical experience who wish to see our medical colleges graduate efficient, thoughtful, resourceful and very competent practitioners of the healing art and to this end schools founded by and conducted by physicians and for the welfare of the people through real medical practitioners, independent of literary control as literary university annexes, are the best

though there may be and are exceptions, which may serve to support the old philosophic rule, "Exceptio probat regulum."

THE PACIFIC MEDICAL MONTHLY ought to be thoroughly immune to loss since Winslow Anderson has left no chance for existence of the Spirochetæ Pallida with his symposium on syphilis. He has knocked out this scourge of civilization with Salvarsan on every page. We had not heard of the Pacific Monthly's illuminant's peril before the terrible news came in the March number.

It is good to feel that Anderson's magazine will not infect one now even with bad ideas. Scientifically speaking it may now be regarded as aseptic.

We conclude the reaction must have been satisfactory from the fact that the patient still lives. Therefore our congratulations. Even the sheet ought to be clean.

THE LAST QUARTERLY MEETING OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION of Great Britain and Ireland, February 22nd, 1912, was held at the London County Asylum, Long Grove, Epsom, a custom the American Medico-psychological Association has, unwisely we think, departed from.

When the American Medico-psychological Association, under the name of the American Association of Insane Hospital Superintendents, met each year at the hospitals of the associated medical superintendents, each member learned of the other's work by personal inspection of his institution. The new members then especially, being usually political appointees from the field of general medicine as is the case now, learned more readily from personal clinical inspection of the patients of the older superintendents of practical psychiatry. It would be wise to return to the old way at our American meeting.

A DRUG STORE CARTOON represents a distracted looking creature trying to find the pharmaceutical counter, going first to one department after another, until at last after inquiring at the soda fountain, picture frame, post card, cigar, candy, watch and jewelry and patent medicine departments, etc., etc.

as he finds the dispensing counter he receives a telephone message from home that his wife has just died.

The medical profession needs exclusive pharmacists devoted to dispensing and the sale of medical and surgical supplies and a syndicating of practical medicine with a pharmacist, chemical and analyzing microscopist and a night physician in the company for the best form and kind of medical practice.

THE SQUARE PHARMACEUTICAL DEAL.—The meritorious manufacturing pharmacist is entitled to the full benefit of the reputation he makes and the dispensing pharmacist should not rob him of his due by substitution nor thus play false to the confiding physician.

This thievery is as reprehensible as where the physician discriminates against a good and honest druggist and diverts from him the neighborhood patronage he has built up by diligent and faithful worthy effort to win and please and deserve custom. We say this just now anent recent cases of substitution of other essence of pepsin for Fairchild's, the best, most palatable and miscible with other medicines, on the market. Fairchild Bros. & Foster, too, are pioneers in this field, driving out the inferior and diluted sacchalactis compounds.

AN AD HOMINUM CRITICISM OF THE FLEXNER REPORT.—From the bulletin of the American Academy of Medicine we reproduce the criticism of Dr. Stuver, of Fort Collins, Colo., in the discussion on the Report on Medical Education Progress of delegate Frederick Henry Garrish of Portland at the (Los Angeles) meeting of the Association of American Medical Colleges, as follows:—

I heartily agree with what Dr. McIntire has said in connection with this report. I also think Mr. Flexner's report is of very great value, but the personal element, the "holier than thou" spirit running through the whole thing, is decidedly pronounced. While there is no question that there is need of great improvement in our medical colleges in every direction, still the fact remains that it is not so much the kind of medical college that a man attends as it is the kind of man that attends the medical college that counts. Dr. Stuver might well have

added also the kind of teacher that attends the students. This is clearly proven by the fact that Dr. Simon Flexner, Mr. Flexner's brother, is a graduate of one of those little third-rate schools which are so bitterly denounced by the report.

The Carnegie Foundation Report as to many American unendowed or lightly endowed independent of university medical schools, was too unfair to be received with credence, even as to the approved university annexed medical department which Flexner so ardently barred. Its characterization of the profession's best schools, endorsed only by the limited means of non-millionaire faculties and trustees and by their labors for the betterment of the profession and the welfare of the people through long periods, when no multimillionaires came forward with munificent endowment gifts, purely as commercial enterprises, was cruelly, coarsely and viciously unfair and unethical.

Some, in fact most, of the best and most creditable work of the profession in the country has been done and is now being done in these very disparaged schools and some of the best men in the greatly endowed university attached colleges have been taken over to teach from these denounced schools. The Flexner Foundation Report as to some of the denounced schools is like straining at a gnat and swallowing a camel.

AMERICAN MEDICAL EDITORS' ASSOCIATION.—The Annual Meeting of the Society will be held at Atlantic City, New Jersey, on June 1st and 3rd, with headquarters at the Marlborough-Blenheim Hotel.

CRIME IN AMERICAN CITIES has been rarely analyzed from a proper critical standpoint. Crime has been simply violation of law, irrespective whether the act were intrinsically wrong in itself (*malum in se*) or made so merely by law (*malum prohibitum* magistrate.) Joseph M. Dreud of New York City has recently analyzed the crime statistics of 100 American cities with the following results:-

Under the caption "*Mala in se*," have been collected all arrests for such offenses as larceny, burglary, arson, frauds, perjury, forgery, felonious assaults, etc. All these crimes

involve moral turpitude, as to which police vigilance and zeal are fairly constant everywhere, and "influence" and "pulls" play an inconsequential part until after arrest. For these reasons—nature of offence and energy of detection—this column practically determines the character of the various cities as to wickedness and depravity, and, taken in connection with the volume of crime shown in the column headed "total," the character is believed to be fixed absolutely.

It is clearly obvious from this that the anti-social crimes (*malum in se*) are commoner in smaller, especially rural towns, than in large cities but that the law-made crime, (*malum prohibitum*) are more frequent in the last; the sum total of law violations being in large cities greatest for this reason.

TO BE A REAL FORENSIC MEDICAL EXPERT one must know all the phases of the case he is concerned in and after careful estimate of every aspect thereof, having reached a conclusion, he should then fortify his opinion by anticipating and being able to exclude all possible objections (logical or sophistic) to the verity of that conclusion. He ought to be as analytical and logical as lawyers are, as Greenleaf on evidence enjoins for lawyers.

The physician should look at, and logically, in the light of his science, estimate the value of all the testimony and make it so plain, positive, unobscure, unburdensome to hold in mind and easily grasped by the common mental description that the jury can see the matter as the expert sees it. He should post the attorney fully as to his view and reasons for his conclusion and charge his fee and get it for his opinion, whether the opinion is favorable or not and either go into the case unbiased or decline according as his opinion suits the attorney or otherwise. He should warn the attorney that he must have all the facts, never go on witness stand half enlightened or later try to fortify an opinion by sophistry, should other facts than those given adverse to his conclusion be brought out. He should so testify always to the truth, the whole truth and nothing but the truth as in duty bound, so that he will always be consistent in his opinion with every other opinion in every other case in which he may have testified or may be again

called to testify. He should be no partisan, but an *Amicus curiae*, *amicus scientiae et amicus veritatis*.

His record on the witness stand should be ever and always one of consistency, probity and absolute fidelity to the truth of his science or art.

THE PSYCHOLOGICAL VERSUS THE CHRONOLOGICAL SCHOOL AGE.—In line of psycho-eugenics and educational psychiatry, The Institutional Quarterly for last December contains an interesting presentation of a resolution on this subject offered at the last July (San Francisco) meeting of the N. A. E. A. The resolution may be found among our Psychiatry selections.

It is true this subject should engage philanthropic and national conservation attention. This subject ought also to engage the attention of the courts, lawyers and the framers of criminal law, as well as educators and philanthropists and the psycho-eugenic conservators of individuals, society and the government. All men and women may be born with equal right to life and happiness, but they are not by birthright endowed with the heritage of liberty or equal freedom, and it belongs to the strongly endowed of mind and body to have a care for the weakly endowed of mind and body, for the welfare of all the unfortunates included and to prevent, if possible, the generation and the importation to our land of the conjugally propagated defectives, and when such come into our social life their maintenance and seclusion from society should fall upon their progenitors.

THE NATIONAL ASSOCIATION OF RETAIL DRUGGISTS will disseminate knowledge on the composition, dosage, pharmacological action and compatibility of the official preparations of the United States Pharmacopeia and the National Formulary and an article on the subject will appear under editorial supervision, in the *Pennsylvania Medical Journal* each month.

INEBRIATE DISTURBING OF THE PEACE.—A man or woman who is drunk and disturbing the peace by boisterous language and disreputable manner, etc., is often promptly arrested on police observation or citizens' complaint and taken before courts of criminal correction or justices or confined.

But if the same man disturbs the peace of his wife or mother or aged father or sister with whom he may reside by remaining away from home of nights in some saloon or elsewhere without notice to family of his whereabouts, his cruel conduct, causing watchworn and wearisome distress and pain of heart and head greater than if beaten with a club, is construed as beyond the reach of police concern.

Why is this thus? Is the peace of the family and the household nothing to consider? Are bleeding and broken hearts of women and brains made insane by heartless soul distressing, peace murdering inebriate vagabondage and cruel violation of home and family obligation not lawful disturbances of the peace requiring police protection? If they are not, the sooner they are made so by legal enactment and coercion of enforcement on the police, the better for the welfare of humanity, especially our women. A gallant woman respecting, woman nurturing, man would not see without effort to prevent it, a woman physically harmed by a drunken brute in the street but when her soul is racked to distraction by the many mind hurts and disease engendering blows of home abandonment of nights, causing weeping, wailing and sorrow to distraction, gallant policemen say if the harm is not done in the street and the public is not disturbed they are helpless. "I can do nothing," say the Sergeants. "He's not disturbing the peace of the public."

If this is law, in the name of Heaven and the wrongs done unto women and children by the drunkard who puts misery and despair and want in homes where joy and happiness might otherwise abide, let the law be made for the home as well as the street disturbance of the peace, made as well for the disturber of hearts and minds that should be nurtured rather than destroyed.

I do not sign this anonymously, I have seen much of it. It is as near home to me as to others, who grieving in silence

because of the impotence of law to give heart peace to any but the drunken street or saloon brawler. If the law only regards the peace of saloons and the streets I plead for the peace of hearts and homes from peace disturbing excessive drinkers.

Let it be understood that the drunkard who neglects his home and children by neglect of his business and heart breaking absentism to say nothing of abuse is not only a peace disturber but a life destroyer and frame laws accordingly.

If a saloon keeper thinks his peace and comfort require it he may, at closing time, put a besotted man, abiding too long with him for his peace and comfort, out in the street. Not all of them would do so but I have known such. But I am far from having the base opinion some do of all saloon men.

I have known some to reduce drinks for such by substitution and one of the best and most lasting temperance lectures I ever received I got from a steamboat bartender, who when I was a youth and stepped up and asked for my first drink, told me I was making a mistake, that it was his business to serve the men I saw come up to his bar, whose drink habits were already formed, but I had better not form the habit. He gave me a lemonade, darkened with a dash of bitters, and said that was the best for me and all he could do for a boy of my dimensions.

I learned later by the loss of bright companions, dead before their time, what a terrible thing the daily drink habit is to men who, once excessive drinkers, can hardly ever come back to sobriety again and who live on to break and ruin their own promising careers and the hearts of others, if happily they do not prematurely die.

The crime of crimes is the torture the drunkard inflicts on those who love him and whom he should regard if not love. The religious persecutions of the past pale in comparison with the inebriate's painful inflictions on the near ones and dear and the dearer than all others.

A STATE BOARD OF HEALTH, or rather the Secretary thereof, the rest of the Board tacitly concurring, makes a half hour or less visit in vacation to a chartered regular medical college, twenty years established, founded and sustained by the pro-

fession's devotion in service and money and well known by the quality, success and esteem of its near two thousand alumni, decides its buildings are not so clean in vacation as they ought to be, makes a few other captious, peccadillo complaints and in the beginning of the school's session autocratically and without legal warrant notifies the assembled matriculates and Boards of other States that the school is discredited. And this in free and lawful America, by a body of regular medical men toward two of the best of its regular medical colleges and others not regular but not unworthy.

REVIEWS, BOOK NOTICES, REPRINTS, ETC.

THE NEUROTIC BASIS OF JUVENILE DELINQUENCY with a study of some special cases mostly from the San Francisco Juvenile Court.—Philip King Brown, M. D., San Francisco. This writer finds from a study of a good many children who have been brought finally to serious account for misdeeds, and especially children who were referred to me from the juvenile court, has shown in almost every case a state of the nervous system in which the symptoms, although often resulting in criminal acts, were none the less expressions of a condition having its beginning long before, in the bad handling of nervous habits, a stimulation of them, or a neglect of them altogether.

BACTERIAL EXAMINATION OF THE STOOLS IN SUSPECTED CANCER OF THE STOMACH.—Same author.

THE UNIVERSITY OF MISSOURI BULLETIN, JOURNALISTIC SERIES, volume 1, number 1, compiled and edited by Walter Williams, Dean of the school is before us. All provisions of the revised statutes and the constitution have here been brought together and classified in a form convenient for reference. Other bulletins are thoroughly indexed by the teaching force of the school to be edited by Mr. Ross.

Copies of these bulletins will be issued to anyone interested. Address Walter Williams, School of Journalism, Columbia, Missouri. The whole series will prove of great value to the publishing craft.

HISTORICAL EXHIBITION OF RARE AND CURIOUS OBJECTS relating to Medicine, Chemistry, Pharmacy and the allied sciences to be held in London, 1913. Organized by, and under the direction of, Henry S. Wellcome.

Mr. Wellcome has, with the object of stimulating the study of the great past, been for sometime organizing an Exhibition in connection with the history of medicine, chemistry, pharmacy and the allied sciences, his aim being to bring together a collection of historical objects illustrating the development of the art and science of healing, etc., throughout the ages.

For many years he has been engaged in researches respecting the early methods employed in the healing art, both among civilized and uncivilized peoples. It has been his object in particular to trace the origin of the use of remedial agents, and enquire why and how certain substances came to be employed in the treatment of disease.

The operating room or barber-surgeon's shop, from an engraving of the XVII century and a cut of Adapa, a Sumerian Deity of Healing about 6000 B. C. are shown on the front leaf. Dhanwantari, the Vedic father of medicine and physician of the Gods and Hippocrates, the Greek father of medicine, are shown. These and the wound man showing locations and instruments causing wounds in 1517 and a plague pictorial allegorical description of St. Roch healing sufferers in the XVII century, leg amputation in the century before, antique medical medals, coins, parchments, chemical apparatus, mandrake illustrated, are some of the features this company propose to offer exclusively to the medical profession at the forthcoming London Exhibition, 1913.

FOR ONE CENT LETTER POSTAGE.—The National One-Cent Letter Postage Association sends us a circular calling attention to the following important facts and we ask our representatives in the National Congress to take notice thereof and act accordingly.

THE EXPENSES OF THE POST OFFICE DEPARTMENT for the year ending June 30, 1911, were over \$237,000,000.

Second Class matter furnished over 65 per cent of the paid tonnage. Its publishers contributed less than \$9,000,000 toward this expense. The Government lost over \$70,000,000 in the distribution of their "stuff."

First Class Postage (The letter mail) furnished almost \$163,000,000. It was only a trifle over an eighth of the tonnage though it paid about 70 per cent of the income. It paid 18 times as much revenue as Second Class Mail Matter and cost less to handle.

Users of letter postage pay a tax of *One Cent* every time they use a two cent stamp to make up the deficit incurred in handling Second Class.

WHAT CAN BE DONE FOR THE PREVENTION OF INSANITY BY THE TREATMENT OF INCIPIENT CASES IN GENERAL HOSPITALS, AND WHAT HAS BEEN DONE IN THE PAST.—By L. Vernon Briggs, M. D., Boston. Reprint from *American Journal of Insanity*. This interesting paper was read before the section on Nervous and Mental Diseases, American Medical Association, St. Louis, Mo., June, 1910.

"EVERY DAY AT THE UNIVERSITY" is fifty pages of print and picture bulletin of the University of Missouri telling the tale of this far famed institution by word and picture, training men for the professions of Agriculture, Engineering, Teaching, Law, Journalism and Medicine.

The pictures are of University activities and the buildings. The verbal and illustrated trip through the University and grounds is full of interest. A copy may be obtained for the asking of the Dean.

The only thing this great university lacks is an agricultural and astronomical or other instructive annex overlooking the great Missouri River, ten miles away, with fishing and swimming pool attachments and tramway connections to make it one of the most attractive centers of literary and hygienic influence extant, with screened mosquito free annexes.

THE DIAGNOSIS OF DISEASE OF THE CORD, locations of lesions, by Dr. Grasset, Clinical Professor at the University of Montpellier, Association of the National Academy of Medicine, Laureate of the Institution. Translated by Jeanne C. Solis, M. D., demonstrator of nervous diseases and electro-therapeutics in the University of Michigan. George Wahr, publisher, Ann Arbor, Michigan. A good and accurate pocket guide for the diagnostician.

"HEALTH AND MEDICAL INSPECTION OF SCHOOL CHILDREN"
by Dr. Walter S. Cornell, Chief Medical Inspector of
Public Schools in Philadelphia.

Dr. Cornell has had long experience in this important line of work. He is a man of high ability professionally and he has brought into this book the results of a very wide observation of the sociological conditions which are so intimately associated with medical inspection. There is an altruistic sentiment prevalent throughout the book which must find an immediate response among all who are familiar with the tremendous handicap under which the children of the very poor are suffering.

Society can make no investment for its future protection which will give larger returns than to show a disposition to hold out a helping hand to the under-fed children of the community, of school age. Poor nutrition and a low standard of morals go together.

Dr. Cornell is an enthusiast and he is entitled to the warm support of those who are in a position to mould public opinion and that means in more or less degree every mature person of the state.

We commend this book to the members of the Mother's Congress who met lately in St. Louis in one of its most successful sessions and to all interested in the psycho-eugenics of childhood and all patriots, ought to be so interested, for from the child is envolved the citizen.

F. A. Davis Company are the publishers, 1914 and 1916
Cherry Street, Philadelphia, Pa.

THE MENTAL DEFECTIVE by William F. Drewry, M. D.,
Petersburg, Va., from the *Virginia Medical Semi-Monthly*.
A good paper from a right source for all interested in
true psycho-eugenics, and who is not? The author
rightly advises a state department of mental eugenics.

The increasing number of Woods Hutchinson's human
misfits must be curtailed or the mental abnormals of human
society will become a grave menace.

A HEALTH BOARD ALMANAC is the means adopted by Dr.
Crumbine, Secretary of the Kansas State Board of Health,

for disseminating wholesome sanitary truths and disease prophylaxis precepts and methods among the people.

This is better work than discrediting on specious and malapropos pretexts the chartered regular non-endowed big university annexed medical schools that send practical physicians that supply the country.

Copies of this health almanac are placed in every farm and school house. These are samples of its health aphorisms:

A careless spitter with a little cough is more deadly than a big man with a big revolver. It is not the odor of sanctity you note in the unventilated church. The only good fly is the dead fly, etc. Good water is more to be prized than rubies and clean hands than much fine gold. A fly in the milk may mean a family in the grave. A dirty well is more dangerous than a dirty kitchen. A timely pock mark on the arm is better than many small pocks on the face (and elsewhere.)

To this we add a few precepts of our own, viz: Sanitary precepts in an almanac are better than deadly patent medicine advertisements. A sunlit parlor is better than a dark tomb. A farmer's welfare is best promoted by plenty of fresh air, sleep, good crops and no smoking before the fire place from three to four o'clock in the morning. If it cannot be helped let the chimney do the smoking.

Too much and too prolonged night light may rob the bed of its nightly dues and the brain of its day-time powers. The human mind and body are mechanisms of repair as well as work and their demands for reconstruction and for fighting disease should be appreciated and obeyed accordingly.

THE VALUE OF RADIO-ACTIVE MAGNETIC WAVE CURRENTS.

By Frederick J. Bruce, M. D., Brooklyn, N. Y.

THE PUBLIC is a "much in little" space paper which ought to interest every patriotic citizen who may have reached the normal conclusion that the time is now at hand when all who love their country should think and study and devise for its salvation.

Political peril is at and within our gates and walls. Self aggrandizement is getting before and above the general welfare in legislation, politics, commerce and industry.

JORDAN ON AMERICAN UNIVERSITIES.—The following criticism of a secular magazine will be read with interest by many readers of the *Alienist and Neurologist* who incline to think that small schools are not yet anachronisms and that big men with either much or small endowment are essential to good and right teaching and who yet believe that the enthusiastic student in a college not multimillionairely endowed, but with *nil desperandum* and *labor omnia vincit* for his life motto still counts for something good in the land of Lincoln and Washington, state boards to the contrary notwithstanding.

Now since St. Louis is striving to make a medical center of Washington University that will equal in reputation that of Johns Hopkins, and the State Board of Health is putting colleges out of business on the ground that they lack efficient equipment, it might be worth while to read what Dr. David Starr Jordan, noted biologist and educator, has to say on this point. From the official report of the proceedings of the American Association for the Advancement of Science the Censor makes the extracts. Dr. Jordan takes the position that rich endowments of universities are by no means unmixed blessings.

"With the scantiest of equipment much of our greatest work has been done. It is said that Joseph Leidy's array of microscopes and knives cost less than a hundred dollars. The '*Poissons Fossiles*' was written when its author lived from hand to mouth in the Latin Quarter of Paris, copying on the backs of old letters and on odd scraps of paper the books he needed, but which he could not buy. Since Haeckel said that the output of any scientific establishment was in inverse ratio to the completeness of the equipment, if he ever said it, facilities for biological work have multiplied a thousandfold. Every German university, Jena with the rest, and most American universities as well, have a far greater equipment than the Museum of Comparative Anatomy had forty years ago. Victor Meyer is reported to have said that the equipment of every chemical laboratory should be burned once in ten years. This is necessary that the chemical investigator should be a free man, not hampered by his out-grown environment. In like vein, Eigenmann has said that when an investigator dies all his material should be burned with him. These should be his

creation, and he should create nothing which he cannot use. These could be useful to none other except as material for the history of science. Therefore, too much may be worse than too little. The struggle for the necessary is often the making of the investigator. If he gets what he wants without a struggle he may not know what to do with it.

"To-day the conditions are adjusted to the promotion of the docile student rather than the man of original force. He goes, not to the man, but to the university. He finds work in biology no longer a bit of green sod under the blue sky shut off by conventional and ugly hedges, and therefore to be acquired at any cost. It is a park, open on every side to anybody. Or, dropping the poor metaphor, he finds his favorite work not a single hard-won opportunity in a mass of required language and mathematics. He finds the university like a great hotel with a menu so varied that he is lost in the abundance. His favorite zoology or botany is not taught by a man. It is divided into a dozen branches, each taught by an instructor who is a cogwheel in the machine. The master under whom he would seek inspiration is busy planning additional cogwheels or the oiling of the machinery. Or, more often, there is no master teacher at all. The machinery is there and at his hand. He has but to touch the button and he has alcohol, formal, xylol, or Canada balsam—whatever he needs for his present work. Every usable drug and every usable instrument is on tap; all we need, degrees and all, are made for us in Germany. Another button will bring him all the books of all the ages, all the records of past experience, carrying knowledge far ahead of his present requirements, usually beyond his possible acquirements. The touch of personality, the dash of heredity, is lost.

"Worse than all this, for the student who is worth while will orient himself even among the most elaborate appliances, and the most varied concourse of elective, is the fact that he is set to acquire training without enthusiasm. Sooner or later he receives a fellowship in some institution which is not the one to which he wishes to go. Virtually he finds himself hired to work in some particular place not under the man, of all men, he has chosen to know. He is given some petty problem; it seems petty to him and to others. He takes this as his major,

with two convenient minors, and at last he is turned out with his degree to find his own life, if he can, with his degree. His next experience is to starve, and he is not so well fitted for this as he would have been had he begun it sooner. If he finds himself among facilities for work, he will starve physically only. If he marries, he starves in good company, but more rapidly and under greater stress. If chance throws him into a college without facilities, he will starve mentally also. In any case, he will lament the fact that the university has given him so much material help, so little personal inspiration.

"The most serious indictment of the 'new school' in science is its lack of originality. Even its novelties are not original. They are old fabrications worked over, with a touch of oddity in the working. The requirements for the doctor's degree tend to curb originality. But these do not go far.

"All honor to the man who holds to his first love in science, whatever that may be, and who records his gains unflinchingly, though not another man on earth may notice what he is doing. Sooner or later the world of science returns to every piece of honest work. The revival of the forgotten experiments of the priest Mendel will illustrate this in passing. Hundreds of men are Mendelians now who would never have thought of planting a pea or breeding a guinea-pig had not Mendel given the clue to problems connected with these things.

"The pity of it all is that Nature is close at hand in America, closer than in the Old World, and 'whoso is filled with zeal to know her has not far to go.' Agassiz remained in America because he was nearer to his studies than he could be in Europe. Here 'nature was rich, while tools and workmen were few and traditions none.' Now we have changed all that. 'Are we not losing sight of the man, of the thing which above all others goes to the shaping of a great naturalist?'

"I saw the other day a paper of an irate German morphologist who, in attacking a certain idea as to the origin of fishes' arms and ours, denounced 'die ganze Gegenbaurische Schule' who followed Gegenbaur in his interpretation of this problem. Never mind the contention. The point is that there is a Gegenbaur school of morphology. This school was not the university, but Gegenbaur himself. We ought to have more

such schools in America, schools of advanced thinkers gathered around a man they love, and from whose methods and enthusiasm the young men go away to be centers of like enthusiasm for others. I believe that our system of university fellowships is a powerful agency in breaking up this condition. If, by chance, it were possible for us to produce a Darwin, the raw material furnished, it would be a difficult task if a fellowship of 500 dollars has drawn him to the laboratory of some lesser plodder, preventing him from ever being 'the man that walked with Henslow.'

"The fellowship system keeps our graduate courses running regardless of whether these courses have anything to give. So long as our fellows are hired to take degrees, then sent out to starve as instructors, so long shall we find our output unworthy of our apparent advantages; and in our sober moments we shall say with Osborn, we do not see how an American university could produce a Darwin."

Present Status of Cancer Investigation. By Philip King Brown, M. D., San Francisco. Status of our Vaccine Work in Cancer. By P. K. Gilman, M. D. Three Cases of Probable Cancer Transplantation from the Use of Gilman Vaccine. By W. B. Coffey, M. D., San Francisco. From *California State Journal of Medicine*.

Fibrillation of the Auricle. By Louis Faugeres Bishop, A. M., M. D., New York. Clinical Professor of Heart and Circulatory Diseases, Fordham University School of Medicine, New York City; Physician to the Lincoln Hospital. Reprinted from the *Medical Record*.

The Diagnostic Value of the Use of the Sphygmomanometer in Examinations for Life Insurance. By J. W. Fisher, M. D. Medical Director of The Northwestern Mutual Life Insurance Company.

The Neurotic Basis of Juvenile Delinquency. With a study of some special cases mostly from the San Francisco Juvenile Court. By Philip King Brown, M. D., San Francisco.

The Working Bulletin System and Board of Control—A Plan for Collecting Evidence Concerning the Newer Materia Medica. By F. E. Stewart, Ph. G., M. D., Philadelphia. From *The Medical Herald*, St. Joseph, Mo.

Report of the Medical Director, Henry M. Hallock of the Hot Springs Reservation to the Secretary of the Interior, 1911.

Heredity in Relation to Eugenics. By Charles Benedict Davenport, Carnegie Institution of Washington Director, Secretary of the Eugenics Section American Breeders' Association, etc.

A Study of Fever in Tuberculosis with Reference to its Causation and Treatment. By Francis M. Pottenger, A. M., M. D., LL. D., Monrovia, Cal. From *The Journal of the American Medical Association*.

Why Digitalis Sometimes Fails. By The Hoffmann-LaRoche Chemical Works, 65 Fulton St., New York.

Vie Congrès belge de Neurologie et de Psychiatrie. Bruges, 1911. Rapport de Psychologie l'Etude Experimentale de L'Association Des Idées, dans les Maladies Mentales, par les Docteurs Aug. Ley, Agrege a l'Universite de Bruxelles, Paul Menzerath, Attaché a l'Institut de Sociologie Solvay, etc. Extrait du *Bulletin de la Societe de Medecine mentale de Belgique*, n 157, septembre, 1911.

The Training School. Edited by E. R. Johnstone, Henry H. Goddard, Ph. D., Alice Morrison Nash. Vol. VIII, 1911—1912. The Training School at Vineland, New Jersey, whence this brochure emanates is doing good work and The Training School contents will enlighten and amply repay for the reading.

Routine Postoperative Rontgenization in Cancer. By Clarence Edward Skinner, M. D., New Haven, Conn. From *New York Medical Journal*. The author of this paper is a competent expert in this line of work, he advises and we have

seen some good results not only from post but from ante Roentgenization. We agree with the author as to the importance of selecting competent operators for this important work.

PUBLISHER'S DEPARTMENT.

A NEW AND PROMISING AGENT FOR THE TREATMENT OF RHEUMATISM.—An announcement that is certain to cause widespread interest among the profession is being made in a large number of American medical journals in behalf of Rheumatism Phylacogen. The new product is a bacterial derivative originated by Dr. A. F. Schafer of California. The term "Phylacogen" (derived from two Greek words—the equivalent of "a guard" and "to produce") means "phylaxin producer," phylaxin being the name that is applied to a defensive proteid found in animals that have acquired an artificial immunity to a given infectious disease.

Rheumatism Phylacogen (Schafer) is a sterile aqueous solution prepared from a large variety of pathogenic bacteria, such as the several staphylococci, *Streptococcus pyogenes*, *Bacillus psyocyanus*, *Diplococcus pneumoniae*, *Bacillus typhosus*, *Bacillus coli communis*, *Streptococcus rheumaticus*, *Streptococcus erysipelatis*, etc. The basic Phylacogen is a "polyvalent" preparation, since the organisms are obtained from cultures made at frequent intervals and from a variety of sources. To this basic material is added an equal amount of the filtrate obtained by similarly growing and treating the *Streptococcus rheumaticus* of Poynton and Paine. The product is indicated in all cases of rheumatism, acute and chronic, not due to gonorrheal infection. It is marketed in sealed glass vials of 10 Cc. capacity and may be administered subcutaneously or intravenously, the former method being preferred except in cases in which quick results are demanded.

Rheumatism Phylacogen, which is the first of a series of phylacogens originated by Dr. Schafer and about to be offered to the medical profession, has been thoroughly tested

clinically in many of the leading hospitals, as well as by competent specialists and other scientific men in various parts of the country, and is said to have shown brilliant results in a large percentage of cases. With the co-operation of Dr. Schaffer, and in accordance with his methods, it is prepared by Parke, Davis & Co., in whom are vested the sole rights of manufacture and sale. Physicians who are interested in this new treatment for rheumatism, and every general practitioner ought to be, will do well to get descriptive literature on the subject. It may be obtained by addressing the manufacturers at their principal laboratories in Detroit, Michigan. Ask for the "Rheumatism Phylacogen pamphlet."

Financier: "My books are in very bad shape."

Confidential Man: "Shall I send for an expert accountant?"

"No; send for an alienist."—*Washington Post.*

AFTER SCARLET FEVER AND MEASLES.—After the acute diseases of childhood there is no remedy that will do more to hasten convalescence than Gray's Glycerine Tonic Comp. Children are particularly responsive to the tonic effects of "Gray's" and it is always gratifying to see the prompt improvement in the appetite, digestion and general nutrition that follows its administration. The palatability and clean bitter taste of "Gray's" make it exceptionally acceptable to children.

THE THERAPEUTICS OF RACHITIS.—Among remedial agents promising benefit in rachitis, codliver oil, as exhibited in Cord. Ext. Ol. Morrhuæ Comp. (Hagee) is worthy of prominent mention. It not only has abundant value as a tissue nutrient, but its contained phosphorus makes it particularly potent in this condition. There is an urgent indication for this latter agent, which is admirably met by the administration of Cordial of the Extract of Cod Liver Oil Compound (Hagee).

GREATER NEW YORK NUMBER.—In June the American Journal of Surgery will issue a number composed of original contributions from men of recognized prominence in the

medical profession residing in Greater New York. Among those to contribute are: Herman J. Boldt, C. N. Dowd, Meddaugh Dunning, Wm. S. Gottheil, E. L. Keys, Jr., Howard Lilienthal, Chas. H. May, Willy Meyer, Robt. T. Morris, S. Lewis Pilcher, John O. Polak, James P. Tuttle, James P. Warbasse and others.

Contributions from these well-known men should make this issue of particular interest and value.

NOVEL USE FOR HYPNOTISM.—A man in New York who corrected his stammering by hypnotism tried the remedy on his wife for cure of excessive loquacity. The wife contended her husband's conduct was a case of mal practice and invoked the divorce court to settle the matter.

ATONIC INDIGESTION demands the most vigorous tonic treatment available. For many years, Seng has held a unique place as a gastro-intestinal tonic, and under its use the most far reaching benefits are obtainable in all functional diseases of the stomach and intestines.

THE NEW DISPENSARY of the Medico-Chirurgical Hospital of Philadelphia is an example of perfected arrangement, capacity and hygiene and therapeutic and psychotherapeutic design and equipment worthy of imitation especially, in the fountain and light and heat supplied general waiting room and auxiliary waiting room.

The chief thing lacking in this model dispensary, common however to all alike up-to-date ones, is separate entrances for eye and infectious diseases. To see other patients sadly afflicted especially by loss of sight and loathsome skin disease is psychopathic.

Many patients avoid dispensaries from fear of infections and the depressing effect of the usual common reception room.

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No. 3.

MAY'S LABORATORY DIAGNOSIS OF GENERAL PARESIS.

A REVIEW BY THE EDITOR.

DR. James V. May of Binghampton, N. Y. in 1910 made an investigation in the laboratory of the Binghampton State Hospital for the Insane of the cerebro-spinal fluid from fifty seven patients with general paresis, for the purpose of determining the relative value of the various laboratory methods of diagnosis, which are now in quite general use. As a control the same tests were applied to the spinal fluid from twenty-nine patients unquestionably suffering from psychoses other than general paresis. The fluids were obtained by lumbar puncture, about 10 c. c. being removed as a rule. The patients were kept in bed for about twenty-four hours as a rule, after the operation and no dangerous results occurred. Headache, dizziness, backache and sometimes nausea followed, but no more severe symptoms were noted. The spinal fluid in general paresis is clear in appearance in the great majority of cases and when not, the cloudiness is due nearly always to blood caused by the needle, and not present in the fluid, as shown by subsequent autopsy, although cloudy fluid may be found when the autopsy is not performed soon after death. Rarely is it cloudy during life in cases which are characterized by an unusual increase in the number of cells.

The reaction of the fluid is very faintly alkaline, and is practically constant in normal as well as pathological fluids. The slight variations in disease are not of diagnostic value, and no effort was made to determine the exact degree of alkalinity which is usually stated as corresponding to 0.1 per cent of sodium hydrate.

Methods of estimating the pressure of the cerebro-spinal fluid are unreliable and have not proved satisfactory, the pressure depending largely on the lumen of the needle used. The various factors which influence pressure, he found were so numerous as to render it of no value in diagnosis. The variations merely signifying that the rate and force of flow from the needle was apparently greater or less than that observed in the average case not suffering from general paresis. The pressure shows no appreciable difference in many instances after death, the fluid flowing as freely as during life when the body is placed in the same position. In the fifty-seven cases of general paresis examined the pressure seemed to be increased in twenty-seven cases, decreased in fifteen, and in fifteen it showed no apparent difference from that found in other forms of insanity.

Serum-albumin is usually considered as being absent in normal spinal fluid although it shows a slight cloud on heating and gives a decided ring with nitric acid and nitro-magnesium contact tests in all cases. The latter method, in which the fluid is brought into contact in a pipette with a mixture of 25 parts of nitric acid and 75 parts of saturated solution of magnesium sulphate, is much the more delicate. These reactions are merely due to proteins and are not to be looked on as an indication of the presence of albumin. The quantitative estimation of the protein content is unsatisfactory. The Esbach albuminometer is the instrument commonly used. The amount of fluid necessary for the determination can be diminished by diluting with distilled water and allowing for the dilution in computing the result. Reference to Table 2 will show that twenty-two out of twenty-nine cases (not cases of general paresis) or 75 per cent of the total number show from 0.03 to 0.06 per cent of protein by the Esbach method. The amount of protein in normal spinal fluid is given by Mott as 0.03 per cent. In the cases of general paresis Table 1 will show that

forty-four of the fifty-seven cases, or 77 per cent., gave over 0.06 per cent., and twenty-nine over 0.1 per cent of protein by the Esbach albuminometer. This would seem to be an important although a slow method of diagnosis unless the centrifuge is used. * * *

Sugar was found in practically all cases without any reference to the form of insanity. It is now conceded by Halliburton to be present in normal fluid and is said to occur in smaller quantities in dementia præcox. The amount of fluid necessary for a quantitative examination renders it impracticable for diagnostic purposes. In the last annual report of the Binghamton (New York) State Hospital, attention was called to the interesting fact that sugar is usually absent in post-mortem spinal fluid.

In all cases of general paresis a considerable excess of globulin is found in the cerebrospinal fluid. This is usually readily demonstrated by the butyric acid test of Noguchi. Two parts of spinal fluid are heated to the boiling point with five parts of a 10 per cent solution of butyric acid in either distilled water or 0.9 per cent salt solution after which one part of normal sodium hydrate solution is added and the mixture again boiled. The appearance of a flocculent precipitate within two hours is considered by Noguchi as diagnostic of general paresis. Blood-free fluid must be used. All spinal fluid contains globulin and in normal fluids or fluid from cases other than general paresis a flocculent precipitate may be obtained nearly always either by reboiling once or twice or allowing the mixture to stand for twenty-four hours. Usually boiling for a second or third time after the fluid has once cooled without allowing the fluid to stand, will bring down a flocculent precipitate in cases which show no evidences of general paresis.

Positive results were obtained by one or the other of those methods in twenty-seven out of twenty-nine non-paretic cases. In some of these fluids the precipitate occurred as quickly as in general paresis and after one heating only. Reference to Table 2 will show that sixteen out of twenty-nine non-paretic cases, 55 per cent of the total, gave positive results with the butyric acid reaction when the technic of Noguchi was employed. Rosanoff and Wiseman in psychoses other than general paresis,

obtained positive results with the butyric acid method in 10.8 per cent and doubtful reactions in 7.2 per cent of the 333 cases, making a total of 18 per cent which failed to give definite negative reactions. The technic of Noguchi was followed in May's tests.

Dr. F. W. Mott, F. R. C. P. London, F. R. S. pathologist to the London County Asylums, in his Oliver-Sharpey lectures on the cerebrospinal fluid delivered before the Royal College of Physicians of London on April 22 and 29, 1910 says of the butyric acid reaction of Noguchi: "I have applied this test to a considerable number of fluids, and have obtained a positive reaction in many non-specific cases in fact in all cases of dementia, whether non-specific or specific, and have found that the amount of precipitate is proportional to the degree of degeneration of nervous tissue, being most marked in the progressive degeneration of general paralysis of the insane."

Attention is called to the fallacy of this reaction in the last annual Thirty-first Ann. Report of the Binghampton State Hospital and also to the fact that it could be easily demonstrated by using larger amounts of the various reagents concerned than are recommended by Noguchi, preserving, however, the same proportions (0.5 c. c. of spinal fluid, 2.5 c. c. of the 10 per cent butyric acid solution and 0.5 c. c. of normal sodium hydrate instead of 0.1 c. c. of spinal fluid, 0.5 c. c. of 10 per cent butyric acid and 0.1 c. c. of normal sodium hydroxid.) "It is entirely to one's individual taste whether one or a multiple of the quantities indicated above will have to be employed."

Dr. May reports W. H. Hough of Washington, D. C., as having found butyric reaction positive, and in some instances very pronounced, in a number of cases of arteriosclerotic dementia where no evidence of syphilitic or inflammatory disease could be found, either in the cytology of the fluid or in the histological examination of the nervous system in the cases in which autopsy could be performed. It may be mentioned that May's and Hough's notes also show that a large majority of the post-mortem fluids from non-inflammatory cases showed a positive butyric acid reaction.

He reports positive results in 48 per cent of his non-paretic cases and obtained five positive results in seven post-mortem

fluids. He followed the technic of Noguchi throughout. May says it is beyond dispute that there is an increase of the globulin content in the spinal fluid in cases of general paresis, although it occurs in other psychoses as well and is not absolutely diagnostic of that disease.

We have found also, however, that a moderate increase of the lymphocytes will occasionally be overlooked. Much more reliable is the accurate estimation of the number of cells per cubic millimeter of fluid by means of the Fuchs-Rosenthal counting chamber. In this method the pipette usually employed in counting the white blood cells is usually employed.

Whenever a lymphocytosis is shown a differential count of the cells, he says, should be made by the Alzheimer method.

There will usually be found to be about eighty per cent of lymphocytes and from one to five per cent of plasma cells with varying percentages of the other elements in cases of general paresis. The great increase of the phagocyte cells and Koonchencellen or fatty granule cells in all post-mortem fluids is of considerable interest. A lymphocytosis is not of course absolutely diagnostic of general paresis and occurs in cerebro-spinal syphilis as well as in some cases of locomotor ataxia and tubercular meningitis.

The Noguchi modification of the Wasserman reaction was used in the cerebro-spinal fluid and in the blood serum in both series of tests. In the fifty-seven cases of general paresis the Noguchi method gave fifty-one positive reactions in the spinal fluid. In the other psychoses it gave only one positive in twenty-nine cases and that in a case of locomotor ataxia. In the blood serum the Noguchi-Wassermann method gave positive reactions in all the fifty-seven cases of general paresis, while in the twenty-nine cases of other psychoses it gave ten positive results. Of these ten cases two were cases of locomotor-ataxia and one had a history of syphilis. In the other seven cases no history is available. The original Wassermann reaction in the blood serum of the general paresis cases gave thirty-eight positive results in forty cases and in the non-paralytic cases gave twenty-five negatives out of twenty-eight. Of the three positive reactions one was a case of locomotor ataxia. No reason can be assigned for the other two reactions. Both of these, however, were cases

in which there was a reaction to the Noguchi modification. In comparing the two systems the Noguchi modification is by many looked on as being too sensitive and giving too many positive results in non-specific cases. This, however, as Noguchi suggests, may be due to the use of excessive amounts of antigen. In regard to the interpretation of results Noguchi says:

If there is a faint degree of hemolysis, the main bulk of corpuscles being intact, the reaction should be called positive. A more intense hemolysis, with about 10 to 20 per cent dissolution of the corpuscle mass, should be called weakly positive, while 30 to 40 per cent hemolysis is designated as faintly positive. Neither the weakly positive nor the faintly positive reaction should be accepted as a definite diagnosis of syphilis without the presence of strong clinical evidence in favor of such a diagnosis.

In another place he says:

It is my rule to base the diagnosis of syphilis on unmistakably strong reactions only, but never on weak reactions when the clinical diagnosis is unknown. On the other hand, I take even a faint positive reaction as a sign of active syphilitic process still present when the specimen is derived from a known luetic case. Again, for the purpose of excluding possibility of syphilis from a case, Noguchi put value even on a faint reaction, no matter whether the person may seem healthy or not.

It will thus be seen that the result obtained is interpreted differently, depending on whether the case is one of known or probable syphilis, one showing no evidence or history of syphilis or one of which nothing is known unless there is practically a complete inhibition of hemolysis which does not always occur in many known syphilitic cases. In this way the personal equation enters strongly into the results obtained and the least inaccuracy in the amounts of the various factors concerned materially changes the results. The most serious objection to the Noguchi modification would appear to be the variability in the amount of specific amboceptor contained in the capillary drop of blood-serum used. No two capillary drops from any two different tubes are the same.

After numerous attempts uniform results with the serum of

syphilitic cases have not been obtained and here are May's conclusions:

1. There is an increase in the protein content of the cerebro-spinal fluid in general paresis.

2. There is a marked increase in the globulin content in general paresis.

3. There is an increase in the globulin content in psychoses other than general paresis in many cases.

4. The increase in the globulin content can be shown better by using larger quantities of the reagents suggested by Noguchi for his butyric acid test, preserving however, the same proportions. This method will show an increase which would often be overlooked otherwise.

5. The butyric acid test of Noguchi has not been accepted as absolutely diagnostic of general paresis.

6. The demonstration of a lymphocytosis in the spinal fluid is one of the most reliable laboratory methods in the diagnosis of general paresis.

7. In the performance of the Noguchi modification of the Wassermann reaction it is important to use a sufficient quantity of the serum to be tested, the capillary drop recommended by Noguchi being a very variable amount.

8. The Noguchi method of interpreting the results of the Wassermann test differs largely from that of many other laboratory workers and may lead to various conclusions, depending on the observer.

9. The original Wassermann method is to be preferred to the Noguchi modification.

10. The Noguchi method of using antigen and amboceptor in the proper form can be adapted to the original Wassermann reaction with advantage.

I have here given more than is germane to our subject to show how diligent have been the efforts made in the biological laboratory to get at and probe one of the important pathological states often but not always found to be connected with one form of insanity. Salvarsan is another laboratory showing and so is the microscopic revelation of the spirochete. In pneumonia too the pneumococcus and the microscopic finding in typhoid and other of the fevers followed by post

febrile insanity is often found and persists for a long period after. But this work and these findings are indefinite and throw no special light on our subject.

What we want and have not yet found is a special and specific lesion that definitely establishes each particular form of insanity without the psychopathic data accompanied with brain disease, primary or secondary, direct or indirect as essential to the support and establishing of our diagnosis of true disease caused derangement of the mind in each particular alienistic differentiation. Mercier in his data of alienism gives no such somo-cerebro or hemopathic differentiation, nor has any other expert in psychiatry.

Knowledge of microbic relations to insanity has not advanced so far as they have to the study of the less psychic morbid perversions of other parts of the neuraxis lower, or even as it has to chorea involving the cortex, though associated there is often a psychic perversion which has very correctly been designated psychic chorea.

We have found a microbic cause for this and for tetanus and for poliomyelitis anterior, rabies and some other spinal states.

NOTE—For brevity all foot notes in the original are omitted.

EUGENICS AT THE HYMENEAL ALTAR:

OPINION IN THE MATTER OF POSSIBLE HEREDITARY SUSCEPTIBILITY OF OFFSPRING TO INSANITY OF A PARTY CONTEMPLATING MATRIMONY.

BY C. H. HUGHES, M. D.,

St. Louis.

A young man twenty-five years of age, born of a mother aged twenty-seven at the time of his birth. This mother had twins at about twenty-two months after this young man's birth. She passed through this parturition apparently healthy and without accident or unusual incident. Shortly after the birth of these twins she became insane and in this state another conception took place. She went on to full time but the child died fifteen months after birth without record of epilepsy or convulsions or other nervous malady.

No sisters nor brothers nor father nor mother of this woman under consideration were ever insane or epileptic. One sister had a child, a boy, who became insane immediately after a violent blow on the head. Of the twin children of the afore-named mother both were males, one dying in childhood of an infantile disease and the other dying at the age of twenty-one of a disease in no way related to insanity.

The father of this boy has always been sane, temperate and healthy and is now living at about fifty-three years of age, having no sign of mental or nervous ailment. No neurotic taint and no psychic peculiarities appear in this son, who is now past twenty-five years old. He is five feet, ten inches in height and weighs one hundred and fifty pounds. He has never displayed epilepsia nor epileptoid nor vertiginous attacks nor melancholia.

None of the grandparents on either side displayed psychopathy. Only one cousin, above referred to as having had traumatic insanity, is in the family record. This boy had also two brothers and two sisters; all lived to maturity free of insanity or epilepsy or allied neurosis.

The mother's insanity passed into terminal dementia and she is still living. The isolated case of insanity in the mother being puerperal and therefore toxic and common to mothers who do not in all cases necessarily have grave constitutional psychopathic taint and the other members of the family being free from its display, coupled with the absence of ancestral insanity, justifies favorable prognosis of progeny exemption under right insanity-exempt, matrimonial alliance.

P. S.—It would not be wise for the above young man to marry into a family greatly predisposed to mental disease.

The above opinion is the first instance in which the writer has been called upon professionally in accordance with the wish of the parties immediately concerned, for a formal written opinion of this kind, though he has been often asked for a verbal opinion concerning the conjugal risk and peril of offspring of epileptic, inebriate and tuberculous marriages, especially.

These inquiries and the recent precautionary insistence of some of the clergy upon medical health evidence precedent to pronouncing the bonds of matrimony, indicate an eugenic and highly salutary popular awakening on the part of the people of this good land, whose perpetuity as an exemplary nation not to be self-extinguished, as other Republics of the past have been, depends upon higher grade of abiding health of mind, body and consequent morals than inhered in the extinct peoples of the decadent past. To endure collectively and potentially a people must be generally and perpetually healthy in mind and body.

The author would be obliged for criticism of this conjugal eugenic note from sources of psychiatric observation. Definite and sane conclusions should be concurrently reached on this subject by those most familiar with it, whose advice will be sought and acted upon, else who shall decide for the clergy and the people most immediately concerned.

IS GENIUS A SPORT, A NEUROSIS OR A CHILD POTENTIALITY DEVELOPED?*

BY JAMES G. KIERNAN,

Chicago, Ill.

Fellow Chicago Academy of Medicine, Foreign Associate Member French Medico-Psychological Association; Honorary Member Chicago Neurologic Society, Honorary President Section of Nervous and Mental Diseases Pan-American Congress 1893, Chairman Section on Nervous and Mental Diseases American Medical Association 1894; Professor Neurology Chicago Post-Graduate School 1903; Professor of Nervous and Mental Diseases Milwaukee Medical College 1894-5; Professor of Nervous and Mental Diseases Illinois Medical College 1905; Professor of Forensic Psychiatry Kent-Chicago College of Law.

It is of interest here to compare another genius of artistic temperament sprung from the commercial dissenting class as mingled with the Anglican clerical, with Ruskin.

Thomas Gainsborough¹ was the son of an English Independent or Congregationalist and a woman whose brother was an Anglican clergyman.

He was born in 1733 at Sudbury of rotten borough fame and educated in its grammar school, founded in 1491. This, like the Stratford School, taught Latin and Greek. Under the influence of the Flemish weavers imported by Edward III Sudbury became a weaving center. Gainsborough's father was a clothier, crape maker and milliner; a man of stately presence, who when in full dress, always, like the gentry of the period, wore a sword and was an adroit fencer. He was an enterprising merchant and had high business ideals. He refused to follow the practice then prevalent of taking "toll" or "sweating" his workers.

* Continued from *Alienist and Neurologist*, May, 1912.

1 Futchel: Life of Gainsborough.

He had a large and (with the exception of Thomas, who supported himself at 18 and thereafter), expensive family; five sons and four daughters. The last were all married. Gainsborough's father died at 65. The mother was a cultured woman who delighted in flower painting. She encouraged him in his early drawing. There was not a picturesque clump of trees nor even a single tree of any beauty in and around Sudbury which was not from his earliest years treasured in his memory.²

The region in which he lived was exceedingly picturesque and had the same aesthetic effect on Constable that it had on Gainsborough. John, the brother of Thomas Gainsborough, was called "Scheming John" because of a tendency to abortive invention. He attempted a flying machine of the wing variety then in air, as witness Samuel Johnson's reference to them in *Rasselas*. His wings were not flexible like the bat's wings suggested by Johnson, but strong and of metal. His attempt at flight was a failure. He had artistic tendencies also and agreed to paint a bull for an inn sign. As the landlord cut him down from \$7.50 to \$5.00, he painted the sign in distemper, not oil, which was washed away by a rain. As the landlord had refused to pay John for a painted gold chain the latter said that the bull had run away.

John had unquestionable skill in mechanics and mathematics but lacked persistency. Harriet Beecher Stowe³ has painted an excellent picture of him in "Sam Lawson," who suddenly sheered off under a trivial distraction from the completion of any undertaking. This malassociation type underlies the professional inventor's mentality and allies it with paranoia. As is usual with this type, John Gainsborough devised several successful mechanical appliances. He died over 80 in an attempt to reach the West Indies to prove an invention he had made to determine the longitude. There were brass and tin models, many incomplete, of inventions found after his death. To a certain extent his failures implied rather unadjustable environment, since many principles on which he acted have latterly been proved correct. He was more

² Thicknesse: *Life of Thomas Gainsborough*.

³ *Old Town Folks*.

of the scientific investigator than the paranoiac professional inventor, who fills the patent office with samples of inventive stupidity, despite the aid given him by the mechanical engineer.

The second brother, Humphrey, a dissenting clergyman, was also a mechanical genius. Whether, as the family claimed, Watt took his improvements on the Newcomen engine from him or discovered it independently, the fact remains that Humphrey Gainsborough had independently found Watt's principle. This is probably one of the many instances where two scientists working independently have simultaneously made the same discovery. Priestley and Lavoisier, Darwin and Wallace and Behring and Roux are a few of such instances. Humphrey Gainsborough's mechanical investigations were done during the leisure time of his ministerial duties.

Of the two other brothers little is known. The first drawing of Thomas Gainsborough was a group of trees made at about nine. At ten⁴ he had made some progress in sketching and at twelve was a confirmed painter.

Ere he was ten he was placed in the school of his maternal uncle, Rev. Humphrey Burroughs. Here he made sketches on the fly leaves of his own and his schoolmates' books. The latter did school drudgery for him in return. The forgery of his father's name to a request for a holiday led to the father's discovery of the talent of the son, belief in his genius and forgiveness of the forgery. At the back of the Gainsborough house was an orchard from which ripe fruit was frequently stolen without detection. One morning Thomas, sketching the trees, saw a man's face in one, which he depicted so well that the culprit was forced into confession. Development of artistic powers became so obvious that on the recommendation of his schoolmaster uncle he was sent to London. Here he resided with a silversmith who gave him an introduction to Gravelot, the engraver, under whom he learned to etch. Fifteen of these etchings are still in existence. Gravelot obtained Gainsborough's admittance to the Academy in St. Martins Lane. Gainsborough soon thereafter left Gravelot's study for that of Hayman,

then esteemed the best British historical painter, whose reputation is now the merest shadow of a shade. Hayman was very convivial and preferred pugilism to art. Gainsborough was subsequently of opinion that Hayman's example had offset much of his home training. The Academy in St. Martins Lane was made up of very commerical conventionalities, indifferent engravers, coach painters (this implied the depiction of coats of arms), scene painters, drapery painters,

*Of men who might have made good jailors,
Nightmen or tolerable tailors.*

They dogmatized on art but understood little of its principles. "They follow," Hogarth said, "the standard so righteously and so laudably established by picture dealers, picture cleaners, picture frame makers and other connoisseurs." Nature had no part in their studies. English art according to Burry was then disgraceful, according to Fuseli contemptible, while Constable found it degrading. The darkest hour, as usual, was just ere dawn. Wilson had come to London and Reynolds was in the ordeal of Hudson's studio. Naturally under such training Gainsborough's early portraits have little to recommend. In three years he set himself free from their thralldom and tried to be independent in London of such cliques. After a year of seeming failure he returned to Sudbury and the study of nature. "It happened," Allan Cunningham remarks, "in one of Gainsborough's pictorial excursions in the woods of Suffolk that he sat down to make a sketch of some fine trees with sheep reposing below and wood doves roosting above, when a young woman entered unexpectedly upon the scene and was at once admitted into the landscape and feelings of the artist." She was Margaret Burry, the sister of a "drummer" for the elder Gainsborough's firm. Numerous protracted sittings for a portrait followed. Warmly expressing her admiration of the artist's skill she gave a hint as to possession of the original. On that he spoke and after short courtship received her hand and annuity of \$6,000. There seems good reason to believe it came from her "natural" father, the Duke of Bedford.

Gainsborough was then nineteen and his wife a year younger. The annuity put them in comfortable circum-

stances, first in Sudbury, later in Ipswich. His father was very complimentary to the new daughter-in-law. At Ipswich Gainsborough had plenty of time to devote to nature as he was very little disturbed by patrons. While there he made the acquaintance of Joshua Kirby, a landscape painter and president of the Society of Artists, but best known by his work on perspective for which Hogarth furnished a very illustrative frontispiece. Gainsborough during this time painted some beautiful water colors which are still extant. Kirby placed his son under Gainsborough's art tuition in 1753. Circumstances now fastened on Gainsborough a Boswellian parasite of the vampire variety.

(To be continued.)

"THE WAY OF A MAN WITH A MAID."

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THE method of psychoanalysis that Freud has applied to the interpretation of dreams with such brilliant results, may be utilized in explaining the exceptional and at first sight inexplicable actions of men. The key is evolution, and devolution, the tendency of some men to hark back to primitive conditions and impulses.

The other day a deserted husband pleaded with his wife who had left him for another man, to return to her duty. She refused. With his lips pressed to hers in a loving salute, he shot her dead.

Let us put ourselves in the position of such a man, and see if we can trace the mental and emotional processes that led to the commission of such a deed.

There is a constantly thickening coat of the varnish of civilization formed over the modern man and woman, but underneath it they are identical with the cave man and woman, unchanged at heart. The simple maxims that ruled the troglodyte, govern humanity today. They are four: 1, When you find your mate, take her. She awaits it. 2, When you have her, live for her. She wants that. 3, When she arouses your jealousy, beat her. She needs it. 4, If she betrays you, kill her. She deserves it.

1. Every woman sits and waits the coming of her lord. She is ready to follow when he beckons. He is masterful. He woos not, beseeches not, implores not, serves not. He takes his own when he finds it; he commands, knowing he will be obeyed; and that is the sign for which she waits. His an-

cestor simply caught his woman, knocked her down if she resisted, and dragged her, none too gently, to his lair. The nearer the modern approximates this type and method the better it suits the woman. History does not tell us that one of the raped Sabine maids refused the union thus forced on her. There is never a man-brute so brutal but a woman clings to him; and the bigger the brute, the more this instinct shows itself among the women, who flock to decorate the murderer's cell with evidences of their appreciation. It is not silliness, not maudlin, but primitive instinct showing through the veneer.

2. What each woman wants, what alone satisfies her, is that all other women shall be to her own man non-existent. She never trusts another woman. Give her lord a chance to cohabit with a sister woman, and she instantly and unvaryingly assumes that such relations are established. She has no belief in, or even conception of, honor between women. She knows every other woman is ready on the instant to weave her web over any and every man within reach. She rarely credits her man with singleness of affection, her instincts viewing him as a polygamist. She craves the attention of the male at intervals only, and finding him always responsive, believes him always animated by sensations she feels only at times. The more secure she is in her exclusive possession of her man, the nearer she will come to happiness—and a really happy wife makes this earth a heaven for the man whose mate she knows herself to be.

3. She is forever questioning her own happiness. Is he the superior man she deemed him? Is he the strong man, and does he love her exclusively and completely? So she uses the arts of the coquette to excite his jealousy and try his mastery. Does he pusillanimously weep, and surrender his headship, sinking into her slave? Then for him she has only contempt; his being is repulsive, his society irksome. She is not mated yet. She has mistaken the impulse that draws every female toward every male; for the recognition of her mate. But if he turns on her with masculine fury, reduces her to subjection with his fists, she creeps in by his side, bleeding, disfigured and bruised, but completely happy and contented. The most devoted of

wives are afraid of their mates; they plan day and night to please them, and win their rare commendation; and if death takes the brutal wife-beater, the widow erects an altar to his memory at which she worships thenceforth.

4. Some women require beating. Lacking it they escape from the husband's control and are incapable of controlling themselves. They look further for the master; they seek by a deeply implanted instinct to give their child the Strong Man for a father. Contempt for the husband reaches its limits; moral degradation touches the lowest possibility of her nature. The sensual impulses develop independently of the maternal instinct. The woman is debased—it is to kill her. She is a rudderless derelict on the sea of society, a constant menace to the outgoing and incoming craft, a peril to social navigation. She spreads demoralization to all who come within her reach. She rejoices in her shame and inculcates immorality, as well as imparting body and soul-destroying disease. "She opens her quiver to every arrow," says the Preacher; and whereas her womanly qualities and functions enable her on the one hand to give man a realization of what heaven may be, on the other her feet go down to hell. Her end is as certain as that of the butterfly, as terrible as the realization of hell can make it.

In mercy to her, then, in justice, as one would apply the torch to a house to stop a pestilence, when she has betrayed you, kill her. Thus speaks primitive barbaric Nature in revulsion from under the veneer of a civilization that has failed in its completed work of perfecting the mastery of the psychic inhibitions.

This is our diagnosis of this man's case; whether it be a correct one, we leave to the jury to decide.

AUTOINTOXICATION AS A CAUSE OF MENTAL DISEASE.

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AUTOINTOXICATION is now generally recognized as a cause of several of the mental disturbances, the etiology of which has hitherto baffled the medical profession. When the intoxication has persisted for sometime or becomes chronic, actual mental disease may follow. The autointoxication from the different glands probably determines certain forms of mental disturbance, but temperament, undoubtedly, is a factor in determining just what form of mental disturbance the intestinal toxins bring about, just as temperament determines what form of intoxication alcohol brings about. In some persons alcohol causes exhilaration or grandiose ideas, in others, motor excitement, combativeness or depression, with or without emotion. In both alcoholic intoxication and autointoxication, as the poisoning becomes chronic the patient suffers from delusions, hallucinations and illusions. The alcoholic and drug psychoses are among the most difficult we have to treat because they are probably mixed cases; alcohol or drugs causing a disturbed metabolism resulting in other toxins being liberated in the system.

The problem before us is to determine what toxins we have to deal with in certain mental disturbances and whether disturbed conditions are brought about by an over or under supply of the secretions from the glands. In this paper I shall not consider the disturbed metabolism of the ductless glands as a cause for mental disturbance except in so far as I have taken into account the thyroid gland in treating certain of my cases. I read a paper last fall which covers this subject fairly well. It has been published in two medical journals. Neither am I

going into the question of germs with the possible division of cells as the cause of periodic mental attacks which I suggested in an earlier paper. In 1905 and 1906, I published in the *Boston Medical and Surgical Journal*, two papers on autointoxication and gave the treatment which had proved successful in quite a number of cases. I have had no reason to change the principle of my treatment as stated at that time. I believe that there is danger of our going too far and that we cannot attribute many of the diseases of the eye, the ear, the sinuses, and the internal organs to autointoxication. There are always enough toxins in our bodies to account for almost any disease which the human being suffers from, and many mental disturbances and diseases of the brain I believe can be accounted for in no other way. I refer especially to those forms of mental alienation, the cause of which the pathologists, during their years of faithful and scientific research, have been unable to fathom.

What is autointoxication? One physician, Bouchard, says that it is "self poisoning of the individual." Another, Olliver, says, "The subject of autointoxication in mental disease is attracting wide attention. Maniacal urine gives rise to excitement and convulsions when injected into an animal, while an injection of urine from a case of melancholia is followed by depression of spirits, restlessness and stupor, a proof that autointoxication is the cause and not the effect of the mental state."

Maudsley asked me why I used "Autointoxication" as the title of my earlier paper and said he should prefer "Self Intoxication;" that Americans were fond of using technical terms such as neurasthenia instead of nerve weakness. Kraepelin considers dementia praecox to be an organic brain disease, probably caused by the action of some harmful agent which damages or destroys the nervous elements of the cortex. The absence of any palpable external causes has led Kraepelin to suggest that we have to do with an autointoxication which possibly has some relation to the activity of the reproductive glands.

John Macpherson, M. D., F. R. C. P. Ed. in the *Edinburgh Medical Journal*, July, 1905, in Morrison lecture, No. 4, delivered before the Royal College of Physicians, Edinburgh, on Insanity states, in summing up his paper, that "The confusional insan-

ities are due to the action of poison on the nervous system, especially the brain. Their type is delirium, no matter whether the delirium is acute and of short duration, or chronic and prolonged. They all result in an injury to the delicate structure of the brain cortex. That injury is more or less severe according to the nature of the poison, and according to the resistance which the brain cells offer to the action of the toxin."

"If it is asked, 'How do we know that there is a poison present in the blood of patients suffering from confusional insanity?' I reply that, 'Had we no other proof than the symptoms, the pathological results, and the course of the disease, there could scarcely remain a doubt as to its existence. We are indebted to Dr. Lewis Bruce of the Murthly Asylum for direct proof of the presence of a toxin which in all probability is the direct cause of the symptoms of this group of affections. There are two main diagnostic symptoms of infection of the system by toxins, namely, pyrexia or fever and leucocytosis. In some intoxications both are present; in others, e. g., phthisis and typhoid fever, there is pyrexia but no leucocytosis. In others, there is leucocytosis but no marked pyrexia. To this latter group belong the confusional insanities which I have named subfebrile. Dr. Bruce's description is so important that I have asked and received his permission to quote some extracts from his published writings. It should be explained that in normal persons the number of leucocytes per c. mm. of blood is 6,000 to 10,000—they should not exceed 12,000. "Early in the disease and coinciding with the hyperleucocytosis (which was found on admission to be from 15,000 to 17,000) the percentage of polymorpho-nuclear cells was frequently above 70. Let me explain that an increase in the number of polymorpho-nuclear cells is considered a certain sign of toxæmia. Later in the disease, during relapses, it is quite common to get a hyperleucocytosis of 20,000 or 30,000, with a polymorpho-nuclear percentage of 80 or even higher. A relapse generally is preceded by a fall of the leucocytosis to 10,000 or 13,000, with a low polymorpho-nuclear percentage. As the excitement increases the leucocytes gradually rise, and the percentage of the polymorpho-nuclear cells also rises until the attack reaches its height. When such a case recovers, the leucocytosis remains

high.....A notable feature of all these diseases is the fact that upon recovery taking place, a hyperleucocytosis is present for months and even years after leaving the asylum. In cases which do not recover, but become chronic, the leucocytosis falls, and the percentage of polymorpho-nuclear cells is often below 50." This is a startling fact, the importance of which is far reaching. The object of a hyperleucocytosis is, of course, protective. The leucocytes increase in the blood for the purpose of protecting the system from the encroachments of the poison. Their role is always protective. The intoxication of the system does not cease when a patient has recovered from the mental disturbances manifested by the continued leucocytosis. When, however, the poison has done its worst, down come the leucocytes. The struggle is over; victory remains with the forces of destruction."

"Similar changes in the leucocytes and other blood constituents, indicating indubitably a greater or less intoxication, have been shown by Dr. Bruce to exist in general paralysis, hebephrenia, and even in alcoholism. This confirms Kippel's contention, who long ago held that the toxin in alcoholism was a secondary one, and that alcohol only predisposed the system to invasion by other poisons from the alimentary canal."

Dr. Alfred Gordon, Associate in Nervous and Mental diseases, Jefferson Medical College; Examiner of the Insane at the Philadelphia General Hospital, in a paper read before the American Medical Association, June, 1906, (*Jour. A. M. A.*, Jan. 5, 1907,) on "Migrainic Psychoses," says, of the immediate cause of migrainic attacks, that they lie in autointoxication. He further says, "Abundant material concerning mental disturbances in endogenous and exogenous intoxications is now on record. The studies of indol, indoxyl, indican, skatol, acetone in their relation to certain psychoses are too well known to dwell on. Interesting and instructive are the studies of Richardson, who made exact quantitative estimation of indol in various mental and nervous disorders. The conception of autointoxication is so far advanced that a number of diseases can be readily explained on this basis. Suffice it to mention, in mental disturbances following infectious diseases or puerperal states, to see that a toxæmia is the immediate causative factor

of the cerebral derangement. In this connection it is interesting to call attention to the observations on variation of leucocytosis. When leucocytosis is artificially stimulated (which is Nature's method of combating toxins) there is an improvement in the patient's condition. Among all the organs which are capable of becoming the seat of endogenous intoxication, the gastro-intestinal tract is the most important. It is the *fons et origo* of various toxins.

H. A. Houghton, of Long Island, N. Y., in an article on "The Indican Reaction as Evidence of Enterogenic Intoxication" in the *American Journal of Medical Sciences*, Philadelphia, for April, 1908, says, "Urinary indican is a product of intestinal putrefaction. There may be putrefaction without the production of indol, but there cannot be indicanuria without putrefaction."

Of acute melancholia Regis says, "The gastro-intestinal complications are almost invariably encountered. They consist of dyspepsia with hyperacidity, flatulence and constipation. The breath of melancholiacs is strong and offensive, especially in the patients who do not eat. The secretions are diminished. The pulse reaches 100 to 120, but may fall to 35 or 40. The lesions of acute melancholia are hardly known. The visceral alterations, particularly those of the abdomen, are perhaps more constant and pronounced. This is the reason why so much influence has always been attributed to them in the production of melancholia, whatever might be the mechanism." Regarding treatment, he says, "The best results, in mitigating or keeping down the attack, are obtained by instituting a medical treatment intended to combat the phenomena of autointoxication; that is repeated purgation and gastro-intestinal antiseptis."

Rachford says, "Autointoxication which, strictly speaking, is due to the presence of autogenetic toxins in the blood, is one of the most important, and one of the least understood, of all the causes of neurotic disease, both in adults and in children. Perhaps the most tangible results of recent studies in auto-intoxications relate to acid intoxications. By acid intoxications is meant an increase of normal or abnormal acids in the body media."

Ch. Bouchard, Professor of Pathology and Therapeutics, Member of the Academy of Medicine, and Physician to the Hospitals, Paris, in his Lectures on "Autointoxication in Disease, or Self Poisoning of the Individual," says, "Pasteur has isolated as many as seventeen microbes from the mouth, and that Metchnikoff has demonstrated that man is born free from microbes. Their first implantation occurs in the act of parturition, for soon after birth the skin and mucous membrane become infected with them, either from the air or from the water with which the infant is washed. As early as four hours after birth bacteria have been found during warm weather in the intestinal contents. Usually this is delayed until ten to seventeen hours afterwards. It is in the intestinal tract that microbe flora grow most abundantly and it is observed that these vary with changes of diet whether purely vegetable or animal. Their presence is independent of food, for micrococci and bacilli have been found in the meconium of infants before any nourishment has been taken. No sooner, almost, is a baby given his mother's milk than variations occur in the microbes of his intestine: The bacillus bifidus appears. Cow's milk also favors the development of this micro-organism along with the colon bacillus, streptococci, straphylococci, lactic acid, bacilli, etc. According to Vignal and Suckdorf, an adult man passes daily in his feces from 30,000,000,000 to 50,000,000,000 of bacteria. The harm these micro-organisms do is through the products which they form which when absorbed are toxic, e. g., indol and skatol. Although many of the bowel micro-organisms in health are apparently harmless, they can yet become extremely virulent when their surroundings are altered, as is seen in accidental kinking of the intestine, internal strangulated hernia, or in a limited mucoenteritis."

Bouchard further says, "Man forms in eight hours enough poison to kill himself by his hepatic secretion. Now in twenty-four hours the urine does not eliminate half the quantity necessary to poison a man; the urine of two days and four hours would be required to do this. The volume being equal, bile is nine times as poisonous as urine; in an equal period of time the biliary secretion represents a degree of toxic power six times as great as the urinary secretion. I have shown that bile, decolorized by

carbon, has one-third of the toxic properties of bile in its natural condition. In any case, we must never neglect in autointoxication, to keep up the strength of the patient so he may have time to eliminate the poison. Sometimes we only require to keep him alive a few minutes more in order to save him; we cannot supply him with radical force, but what he requires is active force. Thus we are led to administer, not tonics, but stimulants, which may awaken some force remaining latent. The alimentary canal, however, is an important source of poison; it contains, in addition to the potass supplied by various foods and the bile, the products of intestinal putrefaction. I had to take up this question of intoxication by putrid products from the points of view of many different experimentalists, Gaspard, Panum, Hemmer, Bergmann and Schmiedeberg, Zülzer and Sonnenstein, Selmi, Gautier, Brouardel and Boutmy. Then I studied intestinal putrefaction; I showed that alkaloids exist in faecal matter; that these alkaloidals are of several kinds and that when those of one kind predominate in the intestines, we also find they predominate in the urine. I established, according to Stich, the toxicity of faecal matter. I analyzed the elements of this toxicity, and showed that it is due mainly to potass and ammonia, but that, when freed from these two elements, faecal matter still retains a certain degree of toxicity which must not be overlooked. I have shown that intestinal antiseptic treatment, which causes the alkaloids to disappear from faecal matter and urine, diminishes the toxicity of both."

"Nitrogenous food is much more likely to induce autointoxication than will carbohydrates. The freer use of milk and the return to a simpler diet are called for, since their use is followed by a reduction of ethereal sulphates in the urine. Constipation must be overcome by diet and by aperients. When these fail the administration of intestinal antiseptics becomes a necessity and medicines of this class, if they are to do any good, must possess little solubility and be, therefore, slowly absorbed so that they can traverse the length of the intestines. Müller is not a believer in intestinal antiseptics; he doubts their efficacy; he maintains that there is no proof that iodoform, naphthol menthol, and the salicylic preparations diminish the quantity of ethereal sulphates in the urine or that these drugs influence

intestinal putrefaction. My own experience is quite contrary to that of Müller. Again and again I have seen the most marked benefit follow the administration of intestinal antiseptics."

"Charrin found after administering 4 grams of naphthol-beta in twenty-four hours to three patients who were suffering from chronic enteritis that he had succeeded in suppressing one-third of their urinary toxicity. In hepatic disease Surmount similarly diminished urinary toxicity by one-half. It is the sparingly soluble intestinal antiseptics, such as salol, thymol, and naphthalin, that do good. The treatment of autointoxication by means of intestinal antiseptics is of little use without due attention being also paid to such prophylactic measures as careful dieting and the administration of suitable aperients."

Dr. Campbell Meyers, of Toronto, in a paper on "Neuras-thenia in Some of Its Relations to Insanity," calls attention to cerebraesthesia or brain exhaustion, among the causes of which he says are autointoxication from the absorption of toxins from the intestinal tract, as evidenced by the excess of the ethereal sulphates in the urine. In conclusion he says, "In regard once more to the urgent necessity of suitable treatment in the early stage of the disease, and before the development of any delusions I am convinced, after an experience of more than ten years, devoted exclusively and under exceptionally favorable circumstances, to the study of nervous diseases, and especially of those of a functional nature, that in their early treatment we have a prophylaxis of insanity, which for practical value can scarcely be over-estimated."

In a paper on "The Prodromata of the Psychoses, and their Meaning," T. S. Clouston, M. D., President of the Royal College of Physicians, Edinburgh, says, "The neurologist who is called in to see a woman suffering from an unusual form of headache, with anorexia, insomnia and obscure paraesthetic sensations, often misses the real point of the case because he does not realize that such symptoms are, in this particular patient, higher cortical in origin, and may mean an attack of acute mania in a week if nothing can be done to arrest their course. The psychiatrist often considers a mental attack as being sudden in origin, and puts it down as an un-led-up-to

mental explosion, when in reality there had been sensory and motor, sleep and other signs which would have proved the existence of previous autointoxication, nerve exhaustion, or other disturbance.....Often they assume paraesthetic forms, giddiness, creeping feelings, and sensations of weight or lightness, of heat and cold; they are often so peculiar in character that the patient cannot describe them. They complain of 'queerness in the head,' 'soreness,' 'discomfort,' as if they had 'no feeling in the head;' there is scarcely any paraesthesia that I have not met with. Now what is the cause of such headaches? What is their precise relationship to the mental disease which succeeds them? Are they toxæmic in character? And if so, what is the source of the toxin? Even if they are toxæmic this may be merely a secondary and intermediate stage and not the real primary cause. Through what series of influences does the toxæmia originate? It seems clear to me that we must look beyond the toxæmia, even if this exists, for the real cause of those neuroses of sensibility in most cases. It is quite certain that Dr. Haig's uric acid theory does not explain them.....Nutritive and Digestive Disturbances.....Toxic symptoms arising from the intestinal contents have attracted much attention lately, and all sorts of bowel disinfectants have been used, such as calomel, salol, etc., in some cases with very good effect. The relief experienced through such a smart purge is a commonplace in therapeutics in such cases. I believe many attacks of insanity are warded off by this means, just as attacks of epilepsy are so often prevented. The acuter insanities and general paralysis are specially apt to be preceded by marked intestinal or gastric catarrh. The modern toxic school has pushed the theory of intestinal infection so far as to attribute most of the cases of melancholia, of acute mania and general paralysis, to the toxic effects of adverse bacteria, which most commonly originate in the alimentary canal."

Dr. Paul Dubois, Professor of Neuropathology at the University of Berne, in speaking of nervous disorders, says, "In short, when pathological anatomy discovers a lesion, a focus of inflammation, a hæmorrhage, a thrombosis, and when chemical analysis discloses a condition of intoxication, we no longer speak of neuroses, even though the symptoms might have been

essentially 'nervous.' We thus recognize the first cause of the clinical syndrome in the various somatic affections, syphilis, tuberculosis, arteriosclerosis, alcoholic intoxication, uremia, etc."

Bianchi, under "Acute Delirium," says, "The old and vexed question as to whether acute delirium is a morbid entity or a syndrome occurring at an episode in various morbid states still remains unsettled. Yet were we to consider acute delirium as an expression of grave intoxication, we should have no difficulty in conceiving that it might sometimes be an illness in itself, at other times a complication of another affection. The difficulty lies in defining the cause of acute delirium—that is to say, in deciding whether it is always a specific infection produced by a micro-organism, or if various pathogenic agents are capable of giving rise to it. The problem is not easy of solution, for the diagnosis of true acute delirium is difficult. Between acute sensory delirium (grave sensory insanity) and the acute delirium that presents convulsive phenomena at an advanced stage, there is a gradation of intermediate forms that make the question of diagnosis extremely difficult. Fever, intense and acute psycho-motor agitation, and complete hallucinatory disorientation, are phenomena that are observed also in less serious varieties, and terminate in recovery." Under Etiology, he says, "On the real nature of the intoxication hangs the keen discussion aroused by the bacteriological researches carried out in my clinic. The discovery of a particular bacillus first described by Piccinino and myself, and confirmed by some, denied by others, has led to an unquestionably happy result, inasmuch as the majority of those who have repeated the investigations (Rasori, Ceni, Pottes, Cabitto, Alessi, Capelletti, Kalzowske) have found either the same bacillus, or something analogous, or other micro-organisms, such as the staphylococcus aureus, diplococci, streptococci, etc. When we consider that the bacterial varieties met with at the outset in other acute curable forms are no longer found in the blood of the patients, once the first phase of the psychopathy is past, these results indicate that the bacteria are related in some way, directly or indirectly, with the genesis of the disease. The problem is by no means easy of solution, but we can hold it erroneous to say

that the presence of these micro-organisms is casual or due to penetration into the blood in the period preceding death. These two objections presented by Ceni and Capelletti are overruled by the fact that, in the initial phase of the acute grave psychopathies, the bacterial finding is often positive, whilst later it is almost always negative, just as it is negative when the disease ends in recovery. It is also a fact that in acute delirium the bacillus has been found in the blood, not only in the period preceding death, but also during the second phase of the disease, several days before death." He follows with an outline of the course of the treatment which includes intestinal disinfectants, lavage, sponging, milk diet, salol, etc.

TREATMENT. When a patient is brought to me suffering from acute or confusional mental disturbance or profound mental depression, I have an analysis immediately made of the feces, urine and blood, and repeated analyses should be made within a few days. If the findings indicate an auto or self-intoxication, I start at once with high enemas of normal salt solution, with salt baths and often with hot packs for the purpose of elimination. At the same time I prescribe tonics and antiseptics. In giving the high enemas of normal salt solution I usually advise the Quimby syringe or douche and as soon as possible I give not less than three quarts, having the patient retain it as long as possible. In case high enema is not practicable, saline infusions may be given. Mosher, of Albany, says the use of saline infusions possesses remarkable properties as a combined stimulant and sedative. The remedy should be used with discretion. In toxæmia and delirium it not only relieves symptoms, but sometimes saves life. Preceding the enemas I give 3 to 5 grains of Blue Pill which I repeat every week or ten days. Dr. Hasket Derby, in a letter addressed to me, under date of September 23, 1906, in discussing one of my former papers, says: "I have never forgotten a case I knew who had been subject to melancholia for the better part of a year, who had gone abroad without result, then entered a private asylum, and remained sometime without getting better. As he expressed it, 'the clouds gathered about more and more blackly,' as time went on. One day, whether by accident or design he got a stiff dose of Blue Pill and was incontinently cured. Years have

passed and there has been no relapse. So you see the reason of my interest in your work." Stomach lavage is used only when examination of the stomach contents seems warranted and the results show the necessity of lavage. In connection with the antiseptic treatment I usually prescribe, especially in all depressed cases, lecithin in the form put up by Hynson, Westcott & Co., Baltimore; and if there are symptoms of thyroidism I alternate the lecithin treatment every two weeks with thyroid tablets as prepared by the Loomis Laboratory in New York, giving 2 to 6 grains a day. I also give, as symptoms demand, a tonic of strychnia or a mixture of nux, gentian and the three bromides as recommended by the late Dr. Charles F. Folsom. The intestinal antiseptics that I have found most efficacious are salol, betanaphtol or naphthalin in salol coated capsules. We know that naphthalin is sparingly soluble, and that it passes to a large extent unchanged through the alimentary canal. No one denies to it the power of destroying the disagreeable odor of stools. Salol, or the salicylate of phenol, has also given excellent results. Having passed through the stomach undecomposed, it comes into contact with the pancreatic juice in the duodenum, and is thereby split up into salicylic and carbonic acids. The latter is set free where it is required but, as Brunton says, it has the disadvantage of being poisonous, and betanaphtol is to be recommended in stead....I invariably give phosphate of sodium in connection with other treatment. I have given permanganate of potash and corrosive sublimate but these two remedies are usually not well borne by patients. Buttermilk or sour milk I have found very valuable as an adjunct in treating depressed cases, but it must be prepared in hygienic surroundings and from milk which has had the butter extracted from it if the best results are to be obtained. Buttermilk prepared by using the whole milk and tablets of Bulgarian lactic acid bacillus I have found is not well borne by many patients and others soon tire of it. I have never yet used the colon vaccine but I am not unmindful of its possible advantages.

C. Spencer Kinney, M. D., First Assistant Physician, Middletown State Homeopathic Hospital, Middletown, N. Y., in the *State Hospitals Bulletin*, July, 1907, writing on "Melancholia and Its Treatment" says, "In melancholia we recognize

an exhaustion of nervous strength which calls for rest and nutrition. That this may be accomplished, the elimination of all waste products is brought about by drinking freely of pure water and by irrigating the bowels every third day with water that has been boiled, used as hot as possible, and retained until it has been absorbed and passed through the kidneys. The quantity to begin with should be about one pint, and may be increased to three pints without difficulty. This should always be used hot to escape the unpleasant symptoms liable to follow the use of cold water. It has been claimed that the frequent use of this method produced a weakness of the intestinal canal, rendering its condition worse than the difficulty the treatment was supposed to remedy, but, after employing it a number of years, nothing but praise can be given it. In cases where the emaciation has been rapid, oil, about two ounces with each enema, should be given, and retained by the patient. The more of this oil that is absorbed, the more quickly a healthy action of the intestines will return. Where this flushing has been continued from one to three months, as seemed necessary, a marked change for the better has occurred in every patient on whom this treatment has been employed. It eliminates the effete material retained in the intestinal tract, induces a freedom from auto-infection, and consequently allows a more thorough oxygenation of the blood, and permits better results from the action of medicine. Any condition of constipation in a case of melancholia is an evidence of lack of care of the nurse and physician in charge of the patient. Intestinal antiseptics is of as much value in the treatment of melancholia as it is in the treatment of typhoid fever or of cholera. Irrigation of the bladder should be employed whenever the urine becomes thick with sediment, and it may also be used in the case of enlarged prostate." Of melancholia, he says, "The patient being under the direct observation of a trained hospital nurse, the bodily functions are closely watched, and every means taken during this period to establish a functional regularity. Under this method constipation is a rare occurrence. The heart becomes stronger by rest and by the method of treatment previously described. When the patient must be fed by a tube, bovine (one teaspoonful), Mellin's food (two teaspoonfuls), hot milk (one-half pint), have been

found very satisfactory, patients living on this for two or three years at a time without difficulty, and in a number of instances recovering."

In an editorial in the *Journal of the A. M. A.*, June 22, 1907, the editor says, "Common salt given, forms a rapidly acting and effective cathartic. A small teaspoonful of table salt is dissolved in a glass of cold water and a few drops of lemon juice added. This is swallowed and followed immediately by another glass of cold water. The patient should not remain in bed after the draught, which usually acts thoroughly as a cathartic in a short time. The cleansing of the intestinal canal should be followed by limitation and regulation of the diet....Intestinal antiseptics should possess the following properties: 1. They should be non-poisonous in the doses in which they are efficient as antiseptics. 2. They should be capable of mixing more or less thoroughly with the intestinal contents. 3. They should not be readily absorbed. 4. They should be soluble enough to yield their antiseptic constituents, but not so soluble as to be readily separated from the mass of the intestinal contents. Betanaphthol is a substance that appears to fulfill the conditions required of an intestinal antiseptic to an exceptionally high degree. Experimental results regarding its antiseptic power are somewhat at variance. Bouchard and Maximovitch having found that about 1 part to 5,000 (3 grains to a quart) will arrest putrefaction, while the experiments of Surveyor and Harley indicate that naphthol is less active as a germicide than is bismuth subnitrate. It is very slightly poisonous, so that large doses can be given; it is soluble enough to act as an antiseptic and insoluble enough to act throughout the entire intestinal tract. Excellent clinical reports regarding its usefulness have been given, but it appears to have fallen in the estimation of the profession."

Dr. W. F. Waugh, of Chicago, in a letter to me under date of December 7, 1906, says, "I began using the sulphocarbolates as intestinal antiseptics in 1880, and it is, I believe, altogether owing to the support given these agents by Dr. Abbott and myself that they are now used by the ton by many thousands of physicians. I am far from contending that they are the only intestinal antiseptics, or best suited for all diseases demanding

this method of treatment, but will say that of all I have tested they have given the best results. We have had great difficulty in obtaining these salts of sufficient purity, being finally compelled to produce them at our own laboratories. When chemically pure they can be taken in almost any dose, but if the bowels are thoroughly emptied before hand, it is rarely necessary to exceed 40 grains a day. One of the most remarkable of our experiences, has been the improvement which follows in pulmonary tuberculosis when the bowels are emptied and disinfected."

J. D. Steele, of Philadelphia, in an article on "Experimental Observations on the Value of Intestinal Antiseptics," Medical Research, Boston, March, 1908, says, "In three cases in which bismuth salicylate was used, the daily average amount of bacteria fell within three days after the drug was given to one-half or one-quarter of that in the control observation. In two cases in which betanaphthol was given the bacteria fell after three days to about one-half the control. In the third betanaphthol case the bacteria increased for three days, and then remained about the same as the control for three days; this patient was a young woman with gastroptosis and insufficient gastric secretion, but with no decided symptoms of intestinal disturbance."

In the Editorial of the A. M. A., May 2, 1908, the editor says, "The results of Steele's investigation of a limited number of cases by this method indicate that, in the normal individual at least, bismuth salicylate greatly reduced the number of bacteria to be found in the feces, while betanaphthol is somewhat less effective. If the intestinal tract is diseased, however, it is probable that irritating antiseptics may rather increase bacterial growth, because the injurious effect on the normal protective agencies of the gastrointestinal tract may more than offset any antiseptic effect that the drug may exert."

Dr. W. L. Brown, in the Medical Press and Circular, of London, on "Intestinal Intoxications," says, that he believes that we shall ultimately be able to refer all the real intestinal intoxications to the presence of actively pathogenic bacteria among the ordinary saprophytes of the intestine. He summarizes the points of treatment in a case of proved intestinal intoxication as follows: 1. A simple diet in which milk (reinforced with

lactic acid if desirable) plays a large part. 2. Ordinary regulation of the bowels, without any drastic purgation. 3. Use of naphthalin tetrachlorid as an intestinal antiseptic. 4. Attention to septic conditions of the mouth. 5. Identification of the microbe responsible and preparation of the appropriate vaccine.

In an article by Kahane in the "*Enzyklopaedie der Practischen Medizin*," Wein, 1905, he says, "The essential conception of autointoxication, meaning 'self-poisoning,' is the injury done by toxic products which arise in the organism itself in its life processes, especially those of metabolism." In way of treatment, he recommends stomach lavage, intestinal irrigation, administration of gastrointestinal antiseptics, such as hydrochloric acid, menthol in capsules containing 0.1 to 0.2 (gr. $1\frac{1}{2}$ to 3), three to six daily, resorcin in solution 2-200, a teaspoonful three times a day. When excretory functions are low they must be stimulated; the skin with diaphoretics, the kidneys with diuretics, the bowels with cathartics. In acid intoxications are recommended alkalies, sodium bicarbonate up to 100 grams (25 drams) in 24 hours, and energetic cathartics. In severe intermediary autointoxication venesection, and eventually intravenous injection of physiologic (0.6 per cent) salt solution.

Styracal is highly recommended as an intestinal antiseptic by H. Engles of Berlin, Germany. The dose for adults is 15 grains in 24 hours. It is a combination of cinnamic acid and guaiacol. I have used *Phytolacca decandra* alone and in combination with salol in capsules before meals for intestinal antiseptics. I have also used *Adonis vernalis* as a diuretic to relieve the system of accumulated toxins. Yogurt is a new antiseptic which has recently been exploited for intestinal autointoxication. Metchnikoff, Tissier, Combe, Bourget, and others are interested in this form of treatment.

Harris A. Houghton, A. M., M. D., of Bayside, Long Island, New York City, in a paper read before the Alumni Association of the New York Post-graduate Hospital, on "A Study of the Relationship between the Arterial Hyperextension and the Indicanuria in Nephritis," says, "Naphthalin is one of the aromatic coal tar products, and is soluble in water

only to a slight degree. A greater part is supposed to pass through the gastroenteric tube without absorption and be evacuated with the faeces. A lesser part is taken up by the intestinal mucosa and is carried to the liver. It reaches the urine in the form of naphthoquinon combined with sodium or potassium and sulphuric or glycuronic acids, under conditions to appear later. This combination will show itself in two ways. The urine of a patient taking naphthalin contains a chromogen which shows a very light canary-yellow with Jaffe's test for indican. This is appreciable even when indican is present in excess. There is sometimes a crystalline deposit in such urine after cooling."

Leon S. Medalia, M. D., in a paper read at the Mass. Dental Society, June 10, 1909, speaks of the colon vaccine as having given the most satisfactory results in cases of infection from autointoxication and from intestinal disorders when due to colon. He says, "Here the autogenous vaccine or the vaccine made from the patient's own culture has always given better results than the stock and seemed to be a necessary element in obtaining good results." If this is true in *Pyorrhoea Alveolaris* why should it not be worth trying in cases of mental disturbance caused by autointoxication of intestinal origin.

Paton says it is not rare to find mental disturbance in hepatic disease. Ballet has recently furnished a great variety of clinical pictures, those of particular importance being the states of somnolence and stupor that not infrequently develop during the terminal stage of hepatic disease. The milder cases show defective faculty of attention, the patient being unable to direct his energies persistently in one direction. The attention is not diverted, but as the result of the lethargic condition it simply lapses. In another group of cases where marked disturbances in the hepatic functions were noted, the patients were more or less excited and showed evidences of speech compulsion, psychomotor excitability, auditory and visual hallucinations, and more or less indefinite and unstable insane ideas. The hepatic stupor or coma is far less apt than the uraemic or diabetic form to show evidence of remission, and a complete recovery seldom, if ever, occurs.

Dr. J. M. T. Finney believes that the following conditions

play an important part in the pathogenesis of the delirium:

(1) An abnormal condition of the bile due to derangement of the hepatic functions.

(2) A possible absorption of toxic products from the presence of bacteria.

(3) A predisposition to nervous and mental disturbances, causing an increased susceptibility in the abnormal reactions for certain toxic products.

He also says that in the records of 100 operations upon the biliary passages the occurrence of a peculiar transitory delirium varying from a mild temporary aberration to a wild delirium had been noted in about 10 per cent of the cases. These mental disturbances develop during the course of convalescence after the bile passages have been drained, and often last but a fortnight.

Paton says, undoubtedly many of these symptoms referred to are the result of an intoxication due to the accumulation in the system of substances, the result of imperfect metabolism. The toxic products that cause the symptoms may be derived from more than one source, and are either manufactured directly by the liver or absorbed from the intestinal tract. He says, "Regarding the disturbances in the gastro-intestinal tract and their relation to forms of alienation very little is known. That the former are frequently associated with various forms of mental disorders is a matter of common clinical experience, but the relation that they bear to the alienation is a matter of conjecture. Von Wagner assumed that in certain forms of acute mental disease there was an autointoxication due to defective metabolism; and the same observer was able to demonstrate the increase in the urine of indican as well as of acetone. In the case reported by Raimann the symptom-complex resembling Korsakow's syndrome was noted in a patient who died and in whom at autopsy were found multiple lympho-sarcomata of the small intestine. A few other cases somewhat similar in character have been reported in the literature. That there is a marked defect in the functions of the stomach and intestines in very many cases of alienation is a matter of common clinical experience, as, for example, in cases of dementia praecox and manic-depressive insanity. More-

over, milder forms of mental depression, such as hypochondriasis, are not uncommonly noted in connection with gastrointestinal disturbances. The second group of mental disorders which are considered are designated acute and subacute, confusional and delirious states, in part the result of autointoxication. These include the febrile deliria, the acute collapse delirium, the so-called amentia (Meynert), and Korsakow's syndrome. Although the evidence which favors the autointoxication theory is meagre and more or less indefinite, the possible influence in these cases of toxic products has not been lost sight of and this grouping, therefore, seems to be one which offers a reasonable working hypothesis."

Paton, in his chapter on the psychoses which are probably in part the result of an autointoxication, describes several forms, among others the so-called infectious or fever deliria, including all forms of mental aberration associated with febrile diseases and not forming an integral part of other psychoses. Second, the acute, or collapse delirium, and lastly the subacute delirious or confusional states. Of the first he says, "It is the general consensus of opinion that the pathological changes which occur in the central nervous system as the result of elevations of the bodily temperature are to be regarded as the results of auto-intoxications; but the manner in which the toxins act is still a mystery, and as yet no definite relationship can be established between the lesions and the clinical symptoms. Formerly considerable importance was erroneously attached to the supposed hyperaemic or anaemic condition of the cerebral vessels. Such conditions may be the result merely of preagonal or post-mortem changes, or due to the alterations in the position of the body. In some cases of acute intoxication psychoses mitotic figures are demonstrable in the glia."

"The gastro-intestinal disturbances of acute delirium are generally pronounced. Sometimes the nausea and vomiting are so obstinate that no food can be retained and a resort to artificial feeding becomes necessary. In other instances the refusal to take food is the result of delusions. The breath as a rule is fetid and constipation or diarrhoea is marked. The urine is often scanty, of high specific gravity, and, according to numerous observers, is very toxic in its qualities, a statement,

however, that does not always hold good. The chlorides are frequently diminished, and certain investigators have found an increase in the quantity of indican and uric acid. At times there may be an unusual flow of saliva. The skin in the cases with a high temperature is dry, but in the asthenic types of the disease is moist and covered with a cold, clammy sweat. At least 50 per cent of the patients succumb. One or more nurses must be in constant attendance, so that everything possible may be done to relieve the symptoms as speedily as possible. Although such patients frequently struggle furiously to get away from their attendants, trying to jump out of the window or to injure themselves in various ways, mechanical restraint should be resorted to until hydrotherapeutic measures and all other means have failed. In practically all cases, if the warm continuous bath is properly given, being supplemented if necessary, by small doses of some hypnotic, it will have the desired effect. The bath should be given with great care, and the resident physician should be within call for sometime in order to note the effects. Every means should be employed to keep up the nutrition. Small quantities of milk should be given regularly every two hours, combined with raw eggs or bouillon. If the stomach rejects nourishment, nutritive enemas—two to three in twenty-four hours—are indicated. Sometimes high rectal injections of normal saline solution at body temperature are of great value in preventing collapse."

In a paper read in 1896, on "The Treatment of Melancholia," Allison says, "If a patient can be made to think that he has some tangible foe to combat he will feel much relieved in mind. If he is told that his liver, his digestion and his intestinal functions are at fault, as they usually are, and that his mind is depressed by an impoverished circulation due to toxic agencies in his blood, he will feel that he has something to hope for in the way of eventual relief. Recurrent and periodic forms of melancholia are due to intestinal infection or auto-toxis. It is reasonable to subscribe also other forms of mental disease to this form of toxic infection. Melancholiacs as a rule, are reduced in weight and often emaciated. Evacuations from the bowels are scanty and frequently suppressed for days. Patient's appetite is often poor and the reason is frequently given

as an excuse for constipation, that the patient eats nothing and a movement is not deemed necessary. Evacuations when they do take place are lumpy, light in color and often extremely offensive." He prescribes the Saratoga mineral waters and some of the stronger aperient waters; washing out the stomach and the drinking of hot water. Nitromuriatic acid or hydrochloric acid, he says, is a useful remedy for continuous use and sub-gallate of bismuth in 5 to 10 gr. doses is a mild antiseptic for the digestive tract, also salol in 2 to 5 gr. doses, and also naphthalin in 1 to 3 gr. doses. "The tendency of late years has been turned to the germ theory as productive of disease. These probably, with the septic products of active bacterial growth in the ill digested and decomposed contents of the intestinal canal, may be absorbed as toxic agents in the circulation and result in the various forms of melancholia."

Dr. Lewis C. Bruce, physician and H. DeMaine Alexander, assistant physician to the Perth District Asylum, Scotland, in an article on "The Treatment of Melancholia," published in the *Lancet*, August 24, 1901, say, "We believe melancholia to be a disease of disordered metabolism and that treatment should be directed to increase the excretions of waste products of this metabolism through channels of the urinary and integumentary systems. We mechanically accomplish this end by administering to our patients an abundant fluid dietary. By means of this treatment the blood gets rid of this overcharge of waste products. We assist digestion by giving milk frequently and in small quantities, as this is the most easily assimilated food." They consider the forcing of solid food, or such foods as custards, upon a patient suffering from acute melancholia just as injudicious treatment as would be the feeding of a patient suffering from typhoid exclusively on beefsteak. The insomnia in these cases is combated with paraldehyde.

In excited melancholias he gives 10 gr. thyroid, three times a day for ten days, then injects 1½ cc. terebene into the groin, with the result that the patient is usually much quieter in two days.

In acute insanity he injects usually in the groin 2 cc. of turpentine; sometimes 1 cc. making a terebene abscess to abort,

which it does in many cases, but if it does not, the case is much worse off than if it had never been treated in this way.

The following are a few of my cases chosen at random from among those classified under autointoxication which have not before been published.

Case 1. January 16, 1904. F. A. E., aged 26, always neurotic and eating improper food at irregular intervals. Yesterday became very excited and depressed as the result of the loss of a near relative. Apparently does not want to live; makes attempts to jump out of the window; is sleeping one-half to three-quarters of an hour at a time and awakes startled and frightened. Laid the following note on his bureau today: "To my family and friends: If I die do not mourn for me more than you must. I have done the best I could and am ready to leave my work unfinished, for I know there will always be more to do. I know you love me, and mourning cannot help me." Gave Blue Pill followed by antiseptics and nutrition every two hours in the form of liquid food; massage, and warm baths in the evening. January 18, patient up and dressed and taking solid food with a relish. After this, patient gradually improved and under the constructive treatment with antiseptics, changed from a neurotic into a very calm and steady disposition. He married in 1908 and has a very healthy child and at the present writing has had no return of depression.

Case 2. Mrs. H. C. T., aged 67 when she first came to me, October 10, 1904; had been subject to periodic attacks of depression for many years. Diagnosis had been made of manic-depressive insanity. These attacks started with irritation, excitement, emotion, insomnia and with loss of appetite. In a few weeks the emotional symptoms usually disappeared and she became very obstinate. She is now troubled because she has no emotion, no affection for her family, no religion. She is suicidal and says that the sight of scissors or a paper cutter suggests only one thing, the means of self-destruction. She is often found gazing at a dagger paper cutter on the table or scrutinizing the windows. During the present attack she has felt like screaming at times and is on the verge of violence, and very agitated. She complains of whistling sound in her head, and says, "I cannot rest or get any peace." "I am so sorry for

my children and sisters." "I feel I must scream." "I feel that what you prescribe for me is a punishment, especially the hydrotherapeutic baths." "I wish the Lord would call me home." "I have lost my identity." "I do not feel natural." These attacks which first came once in a few years are now annual and for the last two years there has been some depression most of the time. The analysis of the urine was made for me by the late Dr. Wood, of Harvard. He found the indican increased; sp. gr. 1022; very acid reaction, with considerable sediment with granular hyalin casts; urea 1.47. In speech and action she is much retarded, and what sleep she gets is disturbed by horrible nightmares. She does not perspire; has a hot, dry skin; her breath is offensive; palpation shows a great deal of gas in the stomach and intestines. She has lost about 15 pounds in weight. I prescribed high enemas of normal salt solution, betanaphthol, 5 grains two hours after each meal; salt baths of not less than one hour at night with full diet; massage. Later I gave borolyptol, 2 drams three times a day in a large glass of water in place of betanaphthol, also nux and gentian before meals. Gave orders to the nurse to interest patient and work with her in some hand occupation. The patient was soon occupied several hours a day knitting and crocheting. After the first week the patient gradually improved. On January 30, 1905, she was enjoying her drives and her friends, and had gained 20 pounds in weight. In March, 1905, she was enjoying herself in Atlantic City, living a perfectly normal life and later, after a summer in the mountains and other resorts, she went to Europe where she did as much sight seeing as anyone. Examination of her urine after the first two months showed no excess of indican and the urea was 1.39; sp. gr. 1020, and no casts. In the year 1905, she had no return, which was the first year in a good many that she had been free from symptoms. In the spring of 1906 she was brought to me after she had become quite depressed and suffering from insomnia and had many of her other early symptoms. I immediately placed her on antiseptics, this time using glycothymolin, a dram three times a day in water and also 2 oz. to the pint in the high enemas. She soon cleared up and went abroad and on June 16, her son wrote me, "Mother seems to be doing finely. I left her at Lugano with

a most excellent appetite. She sleeps well and enjoys sight-seeing." In the spring of 1907 she began to sigh a good deal and show symptoms of depression and nervousness. I immediately started high enemas of two to three quarts of normal salt solution, gave her phosphate of sodium, a dram three times a day, and also glyco-thymolin; later I changed it to borolyptol. In a week her nightmares were changed to pleasant dreams. In two weeks I had discontinued the baths and enemas. She had no return until last year when she had about a week of depression; treatment being begun at once with most satisfactory results, and there has been no return since. She is now in the best of health, eats and sleeps well and enjoys her automobile and her traveling.

Case 3. August 31, 1905, Miss J. McC., aged 38. Called in consultation by Dr. Arthur L. Chute. For some weeks the patient has been unable to sleep at all nights; appetite very poor and hallucinations of sight and hearing and delusions of persecution. Hypnotics and tonics have been given her but her condition has been steadily growing more alarming. Prescribed Blue Pill, high enema of salt solution and glyco-thymolin. This was followed by other intestinal antiseptics, such as betanaphthol and phosphate of sodium. Dr. Chute's examination of her urine showed an increase of indican. In five days she had made a decided improvement in her mental condition and a full diet of fluids and semi-solids was prescribed. On September 7, 1905, she was allowed to go in town to get some glasses so she could read and occupation was prescribed. Her improvement was steady, and she was sent to her home in Nova Scotia a little later. On July 27, 1906, Dr. Chute writes, "The patient, J. McC., whom you saw last September, has wholly recovered and is soon to be married."

Case 4. January 31, 1908, Dr. F. W. E., aged 56, President of the State Medical Society of the State in which he resides, comes to me from the West. Has been a very successful but much over-worked man, under tension a great deal of the time with his medical work. A year ago his condition was diagnosed as neurasthenia. He says he is growing steadily worse. He now has thoughts of death and decay continually running through his mind. He has uncontrollable emotional attacks

and he feels he is serving a sentence; he also is suicidal, believes he should not be a burden to anyone. His tongue is coated; breath offensive, much gas in abdomen and stomach, retardation of ideas and speech; reflexes diminished; Romberg position only fair; temperature just above normal; pulse 84; very sleepy; tired all the time; lost 20 pounds in weight within a year. Prescribed colonic flushings of saline solution, phosphate of sodium one dram three times a day, betanaphthol and Folsom's tonic. He returned to the West and later wrote that he was gaining some of the 20 pounds he lost and was feeling better. A recent letter addressed to Dr. E. was answered by his son who says that his father was accidentally killed recently but after his return from Boston, "The only evident sign of any disorder was early exhaustion after physical exercise, and dizzy spells."

Case 5. July 1, 1909, Miss M. S., aged 28, brought by her mother. Patient is extremely apprehensive, especially about her mother; has unpleasant dreams at night of people shooting her, etc., has hallucinations of hearing, but not of sight. She is positive she hears robbers in the house at night, that people are walking behind her, both in the house and on the street when she is really walking alone; sleeps but very little and the hour or two of rest she gets is the result of some powders she has been taking; weighs 98 pounds. Her monthly flow or menstruation has been getting less and less. Pupils are dilated and do not react to light, possibly due to the powders; she does not know what they contain. Has a violent temper; some vertigo, thyroids large and soft; eye-balls bulge to the point of prominence; has lost weight, and expression is entirely changed. Says she feels that the steps she hears behind her are people coming up to shoot her. Prescribed Pluto water and Folsom's tonic, phosphate of sodium and Thyroid Extract. Patient almost immediately began to improve and on July 14 came to my office to say she had no more "peculiar dreams" and that she does not say strange things which she confesses she found herself saying, especially when alone. In August of the same year I sent patient for a rest and change to Mrs. Henrietta Cushing's delightful summer resort at North Sutton, New Hampshire. She gained 8 pounds while there, weighing 105

pounds when she left. On March 29, 1910, patient writes, "I know you will be pleased to hear that I am perfectly well and have been since October." Up to the present time there has been no return of symptoms.

SUMMARY.

Auto or self-intoxication is now generally recognized as the cause of many diseases and abnormal conditions of our bodies and as an important factor, if not the most frequent cause, of disturbances of the brain which result in mental disease. The first duty of the physician is to prevent conditions which in his patients are liable to bring about a disturbed metabolism. With this end in view the family doctors throughout the land should study into this problem and avail themselves of every opportunity to become proficient as to the cause and prevention of mental disease. They should not simply nurse along their mentally ill cases until they are obliged to commit them to some institution, but they should begin the most active treatment as soon as disturbed metabolism is evident, especially if accompanied by insomnia, confusion or depression. If a patient has to be committed, the family physician should follow up the case, and treatment if given, to better enable him to intelligently combat other cases in his future practice or to avoid a similar condition in other members of the same family, due to environments and mode of life.

The treatment should always be vigorous and should consist of colonic flushings of one to three quarts of normal salt solution to which an antiseptic may be added and the whole retained as long as possible. The patient should be put on liquid diet at first with plenty of buttermilk and then semi-solid and if improvement continues solids may soon be added. Tonics before or immediately after meals and intestinal antiseptics between meals when indicated. Some nutrition easily assimilated should be taken on retiring. Alkalines should be given to overcome acid conditions. Prolonged baths for their quieting effect, especially in cases of motor excitement, and hot pack for purposes of elimination should be given. Frequent analysis of urine, faeces and blood should be made, the result of which determines the course of treatment to pursue.

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NOTES ON THE HISTORY OF PSYCHIATRY. VII.

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The last installment of theses notes concerned itself exclusively with a continuation of the translation of Falk's study of the Psychiatry of the Ancients. It discussed the writings of Cicero, Asclepiades, Celsus and Aretaeus.

The present installment will continue the translation, beginning with the work of Galen, although in a short note from Marcellus of Sida, lycanthropy is discussed.

"About this same time Marcellus of Sida composed a poem, in which he gave the first medical discussion of lycanthropy. It is given in Kühn's program, changed in meter, but was not accessible to me. We shall however meet with this disease again among the physicians of antiquity. I desire to state that I am not intending to introduce any consideration of the nature of this affliction in the present work. The literature concerning it is so large, that a critic of the work of Leubuscher¹ had declared the material to be exhausted. I am not quite of the same opinion but believe that I can find a better place for my ideas when I commence to discuss the psychiatry of the middle ages. In this period lycanthropy played a large role among physicians and laymen. But I wish to note here, that according to the luminous study of Leubuscher the disease is to be interpreted partly as a "brain daemonomania," partly as an expression of "murderous impulses."

Galen has left behind nothing systematic concerning our subject, notwithstanding the fact, that the title of some of his chapters might give rise to such a hope.² Although a review of the extensive text of Kühn seemed to offer many opportunities, closer observation however shows that apart from the

many verbal repetitions, as every reader of Galen is accustomed to find, his material dwindles to small porportions.

First of all we find a prolix and subtle analysis of many of the opinions of his predecessors and concerning which we have already expressed our opinion. We recognize in Galen a true follower of the psychiatric teachings of Hippocrates which is ~~not~~ confined to those passages only in which he has made a direct translation of the Hippocratic books, and whose interpretation has not been made any clearer by his explanation.

We would only obligate ourselves to unnecessary and fatiguing repetition if we do not restrain ourselves from reproducing Galen's sentences. We therefore have selected only the more important ones at this time.

Ἰν περὶ τῶν τιεπονξοτοπ τοπωυ (1. βιβλ. γ. κεφδ) he discusses which questions he should put to himself when he confronts a disease. He seeks to find first the seat of the malady or the organ which is first attacked; then he studies the nature of the disease, and selects the quantity and quality of the remedies desired in consideration of the age and constitution of the patient, as also the seasons of the year and the locality. What results he arrived at by this method in psychiatry, and with which he had come to such extraordinary success he calls the gods as witness.

As the chief of the post-Hippocratic writers he explains with clarity and with emphasis that the seat of all mental activity is in the brain. He distinguishes, namely ψυχικαὶ ενεργειαὶ and φουσει; to the first belong sensation, motion and ideas.³

These mental processes only take place in the brain. This organ, which is the source of the origin of the nerves, is also the center for sensation and of voluntary motion.⁴

It may be from the creature in the brain fossae (especially in the posterior) enclosed spirit of the soul, the lever of the mind activity, one could almost venture to say, the being of the soul itself.⁵

However we have no certain proof whether an immaterial power, ασωματος δυναμις, is implanted in the brain and which escapes at death, or whether through the mixture⁶ of the four elements, the brain has attained the proper quality (nature) to

be the center of all these functions. But that the brain is such has been proved by experiments and symptoms on patients.⁷

In many diseases the brain is described as the suffering part. Thus coma, apoplexy, spasms, epilepsy, dizziness, paralysis indicate a diseased brain. The affection can originate directly from the brain or may be propagated from the cranial bones and meninges to the same. The brain and meninges are the diseased organs in all disturbances of mental activity. Here the brain can be attacked in a double manner; primarily⁸ or secondarily. In the first place it is to be observed, as important for therapy, whether the abnormal juices linger in the brain only or in the whole body. In order to determine this the general constitution and the manner of living of the patient is important. Delirium (paraphrenitis,) is pathognomonic in pleurisy, peripneumonia, burning fever,⁹ nervous inflammation or of those portions¹⁰ which are adjacent to the brain, such as inflammation of the temporal muscles.¹¹

An intimate relationship exists between the brain and the stomach, because of the large size of the nerves which go from the brain to the stomach, thus rendering this part of the body more sensitive than other organs. Thus vomiting of bile occurs in fracture of the skull if the meninges are irritated; on the other hand gastric troubles are the source of a melancholic state of mind. Many poisons which disturb the intelligence, also act directly upon the brain through the stomach.¹² It is important to know that all such secondary brain diseases frequently last longer than the primary diseases of the bodily organs.¹²

But now we meet with the ancient teaching of disease in full flower. It is well known that Galen took up the hypothesis of the four cardinal juices with fervor, and sought with great dialectic power to combine with it the doctrine of temperaments. With truly naive self-satisfaction he was pleased with the deductions concerning the injurious influences which more or less of these single humors and the gases developing from them might have upon the brain and of the ψυχικου πνεύμα, residing within it, and how the multifarious disturbances in original quality such as dryness, moisture, heat and cold could bring about different forms of mental diseases.¹⁴ Furthermore we

have to consider another circumstance, whether the brain fossae, whether its vessels, whether the fluids distributed within it, or whether the substance itself was affected.¹⁵

These abnormalities of the juices owe their origin mostly to the bodily organs. Hippocrates had already said the same, but Galen also admits psychic causes. Thus excessive anger can bring about a preponderance of bile, which in turn can cause a pathological excitement. Anxiety and grief can cause an excess of *χυμος μελαγχολικος* which leads to melancholy. A continued sad or happy mood may bring about an insanity just as this latter may lead to a pathologically depressed or abnormally exalted mood.¹⁶

Excessive study or night watching are injurious in this sense.

According to Galen mental diseases are divided into acute and chronic forms.

Fever delirium occupies the primary place among the acute diseases. Phrenitis, also an acute process, differs from the latter principally in its duration, as has been pointed out by earlier authors. It is especially an affection of the pia mater.¹⁷

We are not justified at the present time in regarding it as the meningitis of our present nosology, as for instance Morel is inclined to do, although it cannot be denied that the symptoms which Galen has mentioned as pathognomonic do as a fact appear in the foreground of our present day meningitis. Thus the severe head, neck and backache, stiffness of the neck, convulsions, violent delirium, the at times retarded intestinal activity, the violent diarrhoea, partly also the condition of the pulse. At the same time Haeser calls attention to the fact, (op. cit. pg. 168) that the frequently occurring diarrhoea to which Galen calls particular attention, makes the opinion probable that we have a new form of typhoid in the phrenitis of Galen.

As a contrast picture to phrenitis, lethargy is described as an acute mental disease in which the brain itself is affected.¹⁸ It is a disease due to weakness *οδε ληξαργος, αρρωσος (περι αιτιων συμπτωμ βιβλ. γ. κηφίς VII, 260.)* The sensorium is in such a stupor that the patient is seized by complete forgetfulness; an intense sleepiness, and not seldom deep sleep occurs from which the patient can be roused with difficulty. In the

circulatory organs there prevails a condition opposite to that found in phrenitis. Perhaps we have to look upon both diseases as analogues of the agitated and typhoid forms of typhoid fever. All the more since Galen speaks of a heretofore unknown mixed form of both, without however leaving behind him a sufficiently satisfactory description.

The first of the chronic non-febrile mental diseases is *μελαγχολία*. This expression signifies also, according to Galen, often not only the melancholic form of insanity, but also a temperament disposed to quite different forms of insanity. Galen expressly declares *χυμος μελαγχολικός* as not being identical with *μελαγχολία* (*περι λρασων βιβλ. β κεφ.*) (I, 641 and XI, 343.)

The character of every melancholic mental disturbance is naturally sought for by Galen in a state of continued anxiety and fear which has arisen without cause.¹⁹

Just as children and silly adults are afraid of darkness without reason, so in the same way the black bile darkens the faculty of perception and thinking, so that through internal cause which slumbers within the patient himself, depression in various forms, arises.²⁰

Melancholia can be a primary brain affliction. It arises pathognomically from affections of other, especially abdominal, organs when the hypochondriacal form occurs, *τα υποχουδριαχα και φυσωδεα συμαζομενα παδεαι* (Tom. IV, 406.) Of this Galen gives a striking description of Diokles (*περι πεπουδ. το κων. βιβλ. γ. IV.*)

Through modification of the single symptoms and of the delusional ideas, there occur furthermore many different kinds of melancholia. One patient believes, that by enchantment his enemies have set demons to chase him. Others have delusions of poisoning. For some, they are hated by their relatives; others are hated by all mankind; most of them seek solitude; others run away from darkness; some are afraid of water, as in rabies, and in many peculiar delusions appear.²¹ Many commit suicide, but not all wish to die. Some are very peculiar, they fear death and yet desire to die.

We also find in the chapter on melancholia by Aetius that according to Galen *kynanthropy* and *lycanthropy* are de-

scribed as forms of melancholy but that the psychological and pathogenetic processes are not developed in any detail.²²

Mania is contrasted with melancholia as the other chronic mental disease. Here the false ideas and the words and actions resulting therefrom arise on a basis of a pathological excitement. The delirium is hilarious and inconstant.²² No new or valuable statements are found concerning it in Galen. Chronic mental diseases, he says, may develop from the acute ones (περι των πηπονζοτ τοτι. βιβλ. γ. VIII, 193)

His explanations of the elementary disturbances of the mental processes are of intrinsic value, and they also show, that he was acquainted with deeper lesions of the mental life other than those already cited. Psychologically he divides these disturbances into three groups:²⁴ First of all the anomalies of the φαντασιχη ευεργεια in which a kind of paralysis mostly occurs, the so-called χαρος or the χηταληψις which develops into weakness and mild excitement, as has been observed in χωμα and ληθαργος. Likewise in διαυσητιχη there appears defective direction as (paraphrenitis) insanity, weakness, χινησις ος μορια or μωρωσις (foolishness); finally paralysis as ανοια, and imbecility, congenital (φνδει), or acquired, especially in old age. Disturbances in both directions take place at the same time, yet each one can have isolated hallucination. Some falsely interpret the external sensory impressions (disturbances of φαυταστιχη); others have no such hallucinations but state they have had such.²⁵ Their διανοη τεχον is clouded.

Finally the memory also suffers and indeed to such a degree that many with mental disorder, because immersed in their sensory delirium, live a purely vegetative existence.²⁷ A similar loss of memory, according to a description of Thucydides occurred in some cured of the plague. Where memory and judgment (λογισμος) are both involved, he speaks of it as μωρωσις, yet this is also observed in what Galen designates as *sopor*.

With the loss of thinking the sensibility also suffers. Especially the sensations of analgesia and hyperaesthesia; also there are alterations of motility in which, associated with the various pathological mental states, one finds twitchings, convulsions and paralysis, without however any further details

which would enable one to say that Galen was giving a description of general paralysis of the insane. All these in connection with sleeplessness and restless dreams are cerebral symptoms and as such are just as valuable for the physician as is the sputum in those with lung disease. That the entire nutrition of the body should suffer is not surprising in view of the importance of the brain.

Galen says nothing about the unfavorable prognosis in mental disease other than death.

Before any therapeutic measures are begun it is important to learn whether the brain affliction is primary or secondary. If the latter, then which organ of the body is at fault? This organ above all must be made the object of treatment. Unreasonable physicians here can do great harm, whereas careful physicians, such as the author himself, will, for example, by purgative, which relieves the abdomen from harmful material, be able to obtain astonishing results, especially in the early stages.²⁹

Purgatives are to be recommended furthermore in all diseases otherwise yearly relapses are to be expected.³⁰

As for his medical and dietetic measures they are almost Hippocratic. Treatment is purely somatic. It is directed against the hypothetical changes in the qualities of the humors, therefore cooling, drying out, moistening, etc. These indications however are not always separated. Venesection is advisable, especially when the entire constitution is melancholic. I shall only mention that theriak is highly praised as a remedy for the bad dreams of phrenitis, *προς πτωνα περι ζηριχης*, Tom, XIV. For the treatment of lycanthropy during the attack, he advises venesection up to faintness and palatable food with milk, hiera and theriak baths. If the attack occurs in the evening he advises douching of the head, opium smeared over the nostrils, and hypnotic drinks. In lethargy one uses stimulants such as strong clysmata, strong smelling and sneezing drugs.

From this attempt at a description of Galenic psychiatry it is clearly to be seen that he had cut himself loose from all the false hypotheses of the philosophers and returning to Hippocratic ideas had obtained a clean and correct notion of the seat of the normal and morbid mental activities. He recites them

with all the more security as he strives to support the same by quoting normal and pathological symptoms. He also knew how to combine with cleverness his comprehension of the general disturbances of mental activities in insanity with his psychological point of view. Whether by treatment of many suffering from mental diseases he was able to gather from a wide and thorough personal experience the value of pathology or at least the value of single therapeutic measures, cannot be confirmed. At times it seems as if his knowledge of these diseases was founded particularly on the study of the writings of his predecessors, especially of Hippocrates. However, it is possible that he has had occasion to use them in his practice. His discrimination of primary and secondary mental diseases seems to be taken from life. He himself says that he has treated many such patients with great success. But one can take this with a pinch of salt as many other of his boastings concerning the extent and results of his practical activity. Because of his great knowledge of literature it is striking that he never mentions many authors, such as Celsus, for instance.³¹

Caelius Aurelianus. We must pass over a considerable period before we meet with another physician who can provide us with sufficient material. We can first pause with Caelius Aurelianus, one of the latest advocates of the Methodist school, who probably lived in the fifth century after Christ.

We can express ourselves, however, with dispatch as the text appears to permit, since the author has cited very fully the teachings of the great physicians of his and particularly of former times; thus we meet with many deductions already cited.

In his writings on Chronic Diseases, in the section on Epilepsy, he says the following about "*furor sine insania*," which the Greeks called *mania*.

The action of epilepsy upon the intellect is well known to him. Thus the anxiety, irritability, excitement from the slightest cause, forgetfulness and inclination to sexual excess are described all factors which appear as precursors of the attack. Post epileptic phenomena, such as slowness, resistance to habitual occupations, delirium in some, are all mentioned.³²

Aurelianus begins the chapter on *μανια* with Platonic phrases: divine and earthly insanity, after which he gets to the

Hippocratic doctrine which describes two types of delusions, one as "genus insipientiae" according to which every stupidity is reckoned as insanity; the other consisting of a mental disturbance with involvement of the body. Finally Empedokles is cited, who regards one kind of insanity as a clearing of the soul, the other as material disturbances of the organism. The last has been quoted by Aurelianus as a reproach.³³

After illuminating the etymology of *μανία*, whereby one can not admire in great measure his thorough knowledge of the Greek language, he also defined *μανία* as a chronic afebrile psychosis in contrast to phrenitis. It occurs especially in early manhood, more rarely in old age. Sometimes it develops suddenly, sometimes gradually from latent or visible bodily or mental causes. Among these causes we find exposure to cold, indigestion, immoderate use of wine, nightwatches, love and strong superstition, and also great exertion of mind and thinking, such as arises from strong desire to acquire knowledge (ob cupiditatem disciplinarum), from greediness and ambition. Fright may also lead to loss of the intellect, as is related by Appollonius of the grammarian Artemidorus, who became so frightened at the approach of a crocodile that he lost his senses and imagined that his left leg and hand had been eaten. (Anaesthesien). He also lost his word memory (how long?). From this we conclude that Caelius also acknowledges the brain to be the organ affected in mental diseases.

Apart from the fact that in still another place he speaks of disease of the meninges, he accentuates, that in all such diseases the whole nervous system and principally the head suffers, as is evidenced by headache and a feeling of heaviness and disturbances in the sensory perceptions.

Those are mistaken, who perceive in mania only a disease of the soul and who hold the bodily disturbances to be unimportant. Philosophers have been able to cure mental diseases since somatic trouble of all kinds precedes the outbreak of mental diseases. Caelius sees in mental diseases, just as in other diseases, an affection preeminently of the body, and following the classification of the Methodists, one which arises from constrictions.³⁴

I must call attention here to the teachings of the Methodist School in so far as they have been supported by Galen. They are to be found more particularly in "*methodus medendi*" and "*de optomasecta*" as well as in the thorough study of Aurelianus. Sprengel: *Versuch einer pragmatischen Geschichte*. Bd. II, pg. 55.³⁵

In the early stages one must try to decide, whether epilepsy or apoplexy is present. The pulse is of diagnostic importance. In the former it is full and slow, in mania it is small and rapid. Furthermore, mania is associated with sadness, oppression, palpitation of the heart with insomnia, whereas epileptics mostly have sound sleep. Later the differences disappear as to be sure epilepsy as also other maladies (which, the author says does not) can lead to mental disturbances.³⁶

Mania betrays itself sometimes in violent passion, extravagance, sometimes as sadness, and groundless fear. He speaks of only one type of delusion. In brief words he says, that in insanity the patient is sometimes violently excited, sometimes unusually quiet and are turned upside down. Sometimes they have no feeling of their affliction, and sometimes feel their own confusion. Some patients it is further related, lose their judgment to such an extent, through disturbances of the sensibilities that they lose the knowledge of their own personality and the patient believes himself to be a sparrow, a cat, a dog, etc.

The therapy is again treated extensively. Before the medical treatment proper is discussed the general handling of the patient is taken up. They are to be brought into a moderately light, warm and quiet room. There should be no pictures decorating the walls; the windows must not be too low. It is better to have the patients nearer the ground than in the upper stories as many patients in their excitement jump out of the window. The bed has to be made fast and should be placed in such a way that the person entering cannot be seen by the patient in order that the disorder should not be increased by reason of the change of faces about them. The patient ought to be left alone at all events and not be troubled by strangers.³⁷ The attendants ought to be impressed to fall in with the erroneous ideas and at the same time carefully try to improve, modify them, on the one hand, by granting their truth in order not to strengthen their

delusions, and also to avoid exasperating the patient. If such a patient attempts to escape, and is subdued by an attendant, or if he becomes excited through solitude, one ought to have several persons to help. These are to manage the patient by admonition and also to cause the patient to believe they wish to treat them by massage, etc., which of itself is good therapy. If the patient will not obey anybody in his excitement then it is advisable to physically restrain him, but not too often nor for too long a time. The eyes of the patient should be shielded if the bright light proves a source of irritation.

These rules certainly require no commentary. One could almost believe them to be written by a physician of the present day, because of their circumspection and their evidence of experience and skill. The medical treatment in a narrow sense, so far as the diseases themselves are concerned, is moderately antiphlogistic. Violent cathartics are not advisable. Massage, with natural saltpetre water, not the bad smelling kind, is healing. Injections of water containing nitre into the ear, to reach the sense organs of the meninges are also helpful, although the patient may be greatly annoyed by buzzing in the ears as a result. A careful regime is planned for convalescents. They should be made to walk, and speech exercises applicable to each individual case taken up. Reading is of great value and one ought to introduce mistakes into the offered books for the purpose of arousing interest through the false renderings.

Conversation and reading should not be too exciting, as too much mental strain is just as hurtful as immoderate physical exercises. Moreover theater performances should be arranged according to the humor of the patient and later one can introduce lectures or disputations following the rules of rhetoric. Acquaintances should be present during these exercises and should follow with applause. To the uneducated the questions should be so chosen as to come within his grasp. With the wholly uneducated throwing the discus is advisable. This strengthens the intellect especially when played with an expert. After the disorder has passed, which may be followed for a long time by depression, traveling, especially by sea

voyages, is useful. A monotonous diet should be avoided as much as possible.

If some people prescribe starving, urging as a reason the analogy with animals, which can be tamed by withholding food, these show thereby, that they are fools themselves and do not understand anything about the processes of healing. Caelius combats with great energy the extensive use of means of restraint. Tying hurts the body, the restraint of the hands of attendants is much milder. What can be said about beating and lashing? They only excite the patient more, and when the disease ceases, and the sensibility returns to the normal, the patients suffer greatly from the pains due to such manipulation.³⁸ Hypnotics, diuretics, and cooling remedies are not indicated, the last not, because it has already been seen that the hypothesis of Aristotle, that these diseases are due to overheating is not correct. A heroic use of venesection is likewise to be censured. The weakness and exertion of mental power, which are the direct result of such exhausting venesections, are not rarely the causes of the disgust of life felt by many patients.

What benefit is it to awaken feelings of love? In the first place it is very difficult, and also love can give rise to delusions and further, it seems absurd to use it as a remedy.³⁹

And if love be inspired ought one to allow sexual gratification? Such pleasure weakens the body and thereby the intellect. But prohibition exasperates the patient and all the more since the disease has increased the sexual impulse. Wine is also no cure. Intoxication itself is insanity and the injurious consequences of drunkenness have already been mentioned by Asclepiades.⁴⁰

In chapter VI remarks concerning melancholia follow. The name originated from the frequent vomiting of black bile, not that the disease is a production of the same. Black bile is of equal importance as are anger and passion and sadness, but also a peculiarity of melancholia. Melancholia is no species of insanity. In one instance the head is affected, in another the abdomen. It can be seen that Caelius deals with hypochondriacal melancholy here, which is also a disease due to retention.⁴¹ We do not find anything further of interest in this paragraph.

Phrenitis is to be distinguished from all other forms by fever, that is by a fever which precedes the delirium. It is not identical with the fever, nor with toxic deliria. From a prognostic viewpoint it is of importance to know, that he who is cheerful by nature is sad in delirium.

Caelius believed that in phrenitis the whole body suffers, in that the latter is attacked by fever, but the head suffers especially.

The therapy, which Caelius connects with a discussion and polemic on the prescriptions of Asclepiades, Diokles, Erasistratus and others, corresponds in general to the treatment of chronic mental diseases.⁴²

Notwithstanding that in Caelius we find much already stated by other authors nevertheless his works are of value. His notion of the chronic forms of disease as being after all but one, is original. He also is the first, who freed himself from the cardinal humors, as he attributes equal importance to bodily and psychical causes, he thus held himself free from partiality and extremes as none of his predecessors had done. His therapeutic procedures speak for themselves. No author had been able to formulate his therapeutic methods with the same sharpness or precision nor had any one understood how to criticise the doctrines of former teachers so ingeniously. Moreover his therapy is animated by a true humane spirit, as shown by his application of corrective remedies.

How much Aurelianus borrowed his psychiatric ideas from Soranus can hardly be decided. At all events the author was supported in his chapter by abundant experience, which have been used by him to good advantage. It is also peculiar, that neither Celsus nor Aretaeus are mentioned, whereas other authors have submitted to an extensive criticism. We would not go too far in our appreciation of Caelius, should we be also of the opinion, that Caelius "had given us an example of pathological presentation as well as therapeutic insight" as also stated by Haeser (1 op. citat. pg. 875) that in Aurelianus we find a most excellent representation of mental diseases.

BIBLIOGRAPHY.

1. Leubuscher. Ueber die Welnwolfe, 1850.
2. Galen: On Melancholia. Edit. Kuhn.
3. Galen: l. c.⁷
4. I would remark that in view of Galen's prolixity one can find the same theses and hypotheses in many places in his writings.
5. Galen. l. c. Vol. VII. p. 247, V. p. 210. Edit. Kuhn.
6. Galen. l. c.
7. The whole body suffers if the brain is pressed upon or wounded in its fossae. Emotions, such as anger and fear, deprive the head of its normal working activity, but one can also observe that when nerves have been cut that the parts remaining in connection with the brain keep their function but that the distal parts immediately lose their sensations and movements. Galen. l.c.
8. Galen. l. c. Vol. VIII. p. 329.
9. When delirium occurs with disorders of the diaphragm it is not like phrenitis, in which latter the brain, at least the pia mater, is almost always primarily affected.
10. Galen. l. c. V.
11. Galen. l. c. IV. p. 406.
12. Galen. l. c. I. p. 767: XII. p. 147.
13. Morel, who seems to know these theses of Galen only from the treatise of Trelat, calls attention to the same with much emphasis since he himself makes the variability of the causative agents the basis of his own classification of the psychoses.
14. These explanations need not here be repeated in detail.
15. Galen here rails at the philosophers as home birds and yet most of that which he himself expounds is only desk work.
16. Galen. l. c.
17. Some authors refer it to the diaphragm, hence the name. Dar-emberg, "La medicine dans Homer, p. 27," in his day promised to settle the matter, whether the name originated from the idea that according to the opinion of the ancients the disease had its seat in the diaphragm, or whether phrene was used as a symbol for membranes in general, or specially for brain membranes. Nowhere can we find phrene used in the sense of brain membranes. The meninges are always called *meninges*. It has already been noted that Galen distinguished phrenitis from fever delirium.
18. Galen. l. c. IV. p. 412.
19. Some of them are due to unsatisfied sexual impulses. l. c. VIII. p. 418.
20. These views are found in Aetius as coming from Galen. In this book "On Melancholy" Aetius reproduces the opinions of Galen and his contemporaries, so much so that Kuhn has added it to his edition of Galen; I shall include it in my considerations. In this document *melancholia* corresponds to our melancholy, (1866.) The reader can see by the title that many physicians in ancient times turned their attention to mental diseases, but we are not able at this time to form a judgment as to the results of their experiences.

21. Galen has related of people who think themselves made of glass and who avoid everything for fear of being broken. Another feared that Atlas, crushed by the celestial globe, would dash him to pieces. A third believed himself to be without a head. This one was cured, for Philotinus who treated him, hung a heavy ball around his neck as a part of his general treatment. l. c. XIV. p. 701.
22. Galen. l. c. V. p. 719.
23. Galen. l. c. XIX. p. 493.
24. Galen. l. c. VII. p. 60.
25. Galen. l. c.
26. Galen. l. c.
27. Galen. l. c. Vol. VII. p. 791.
28. Galen. l. c. VII. Chap. VI.
29. If convulsions or delirium should arise from inflammation of a nerve, a skillful physician would sever the nerve and remove the affection.
Of course the muscle to which the nerve went would be rendered senseless and useless for movements. But in all such cases one has to act upon the brain itself, as for instance by douching. l. c. Vol. IV. 370.
30. Galen. l. c. XI. p. 345.
31. His special pathology and therapy of the psychoses is found particularly in *peri pepondoton tapen*.
32. Celsus. *Mentis alienatis et nulla natorum aquitio*.
33. The context permits this interpretation.
34. *Diachusis*, meaning a state of mind, not a bodily disturbance.
35. This author upon the authority of Galen asserts (Galen vs. Julianum) that the methodists treat of the diseases of the soul quite independently because they could not be mingled with any of the communities, (*Strictum ad Laxitat.*) We have however to enlarge this statement to such a point since the last adherent of the school, Caelius, sought to place the psychopathies into the general nosological schema and discovered in them the principal character of the "strictur" disease. Namely, the swollen stomach, the slowness of movements, suppression of excretions, the prominence of the facial veins, fatigue after the disease, although the mental disturbances lend a special impression to each disease.
36. However it is reported in the chapter on Satyriasis that such can develop mental disorders by means of inflammation of the meninges. *Acute morbid. lib. IV. cpt.*
From this paragraph we learn that Themison first described Satyriasis as a definite disease. Caelius distinguishes it as an acute, convulsive disease, the result of immoderate sexual desire, as also from stimulating drugs, and different from the chronic disease, gonorrhoea, by which involuntary seminal evacuation also onanie (*sene in hoc morbo manu in se ipsum operabet*) occurs, but without pain or convulsions.
Satyriasis, which also occurs in women, awakens in them a pruritus which deprives them of all bashfulness. The treatment is local. Handsome people should not be allowed in the sick room under such circumstances; even healthy people could be excited to lustful feelings and to erections, which can lead to mental disturbances.

37. Those who have been feared by the patient ought to be kept away.
But if the patient is unruly, then perhaps such may enter.
38. As done by Titus, a pupil of Asclepiades. Zeit. f. Psychatrie, V. 23, p. 5.
39. Love itself has been called an insanity, which it certainly simulates fairly well.
40. Asclepiades. l. c.
41. It differs also from hydrophobia, with which Themison had classified it, in that the latter is an acute process and shows fright and fear of water only at the end, with delirium and loss of consciousness.
42. The brain, meninges, heart, pericardium, vessels, diaphragm, each according to its author is thought to be the seat of the soul. Galen reports that, according to Strabo, the seat of the soul is in the *epikranides*, Erasistratus in the *meninges*, called by him the *mesophruon*, Herophilus in the brain vesicles, Parmemdes and Epicurus in the thorax, the Stoics in the heart or pneuma of the heart, Diogenes in the arterial ventricles and Empedocles has referred it to the blood.

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(To be continued.)

CLINICAL AND AUTOPSY OBSERVATIONS IN SOME CASES OF ADULT HYDROCEPHALUS AND ALLIED CONDITIONS

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HYDROCEPHALUS is a term which is generally restricted to the designation of a condition marked by a great increase in the cerebro-spinal fluid within the skull, attended with compression of the brain. It may be congenital or acquired, acute or chronic. Both internal and external hydrocephalus are to be considered; the former being ventricular and the latter subdural. Frequently both conditions are noted in the same patient.

Chronic hydrocephalus can not be regarded as being dependent upon a morbid process peculiar to itself. Clinically, it is merely a symptom, and it may remain undiscovered, as will be noted in Case 5. Pathologically, it is often a collateral effect of various lesions. Frequently the accumulation of cerebro-spinal fluid is secondary to compression of the veins of Galen and consequent stasis in the choroid plexus.

Internal hydrocephalus may be confined to a single hemisphere and even to a single ventricle, as will be noted in Case 1. It is often extreme, and there is then a progressive thinning of the cranial bones, and the brain is so greatly compressed that it is reduced to a mere layer as thin as a sheet of paper, in which the structure of the cortical strata is unrecognizable.

The increase of cerebro-spinal fluid is often due to antenatal diseases. As a rule the increase continues for one or more years after birth. The condition may not become apparent for some months. In many instances hydrocephalus arises in consequence of some post-natal disease, especially serous men-

ingitis. Hydrocephalus of chronic form is often the consequence of obliteration of the normal communication between the ventricular cavities and the subarachnoid spaces, or of lesions of the choroid plexuses.

External hydrocephalus, or an increase of fluid in the cortical meninges, occurs nearly always as a result of chronic meningitis. In Case 3, however, a very marked external hydrocephalus existed, in consequence of a disturbance of the return circulation of the brain brought about by a congenital narrowing of the jugular foramen.

Internal hydrocephalus, resulting from serous effusion, comes on as a rule in early childhood, and is not difficult to recognize if the process is an active one. Very often, however, there may be only mild symptoms. There is no question but that in the adult a serous effusion into the ventricles may develop either acutely or gradually and cause symptoms like those which occur as a result of brain tumor. It is then at times almost impossible to make a differential diagnosis.

If internal hydrocephalus develops acutely, there will be, as a rule, an accompanying high fever, and the course of the disease will be rapid with headache, nausea, vomiting, vertigo and disturbance in vision with choked disc, as prominent symptoms. Besides there may be paralysis of the cranial nerves, especially of the sixth, either on one or both sides, and there may also develop cerebellar ataxia. Consciousness is nearly always clouded. The differential diagnosis from brain tumor can usually be made from the rapid onset and the high fever. If, however, the symptoms of internal hydrocephalus come on gradually, the differential diagnosis from brain tumor is difficult. There will be present all the pressure symptoms, such as headache, nausea, vomiting, vertigo and choked disc, and on account of the pressure exerted upon the motor fibres of the internal capsule, there will result weakness and spasticity of the limbs, with increased reflexes and sometimes the Babinski phenomenon. There may be paralysis of the external rectus, either of one or of both eyes. As the result of pressure on the cerebellum there may be incoordination in gait and sometimes incoordination of the eyeballs or nystagmus. The differential diagnosis from cerebellar tumor is sometimes very difficult,

but in cerebellar tumor there is hardly ever involvement of the limbs on both sides and the ataxia is more acute and much more marked. It must also be remembered that internal hydrocephalus may accompany tumor of either the cerebrum or cerebellum, and in such cases there will be, in addition to the symptoms resulting from the tumor, spastic paralysis of the limbs with increased reflexes and the Babinski phenomenon.

Case 1 was a case of internal unilateral hydrocephalus with recurrent hemiplegic attacks. The patient, a colored woman, 74 years of age, was considered on admission a case of acute mania. Before death there was dementia with occasional maniacal outbreaks.

Patient was admitted to the Central Hospital the first time in 1882, with a history of acute mania of three months duration. From this she recovered and was discharged in 1887. She was re-admitted in 1891, from the Poor Farm, and from that time was in the hospital until her death in 1901. No complete history could be obtained. In the hospital, she at first had severe periodical maniacal outbreaks, which were gradually followed by dementia. Physically she was well up to November, 1900, when she had an attack of hemiplegia, from which she recovered in four or five days. She was well again until January 6th, 1901, when she had a similar attack, from which she recovered in three days. These attacks at the time were diagnosed as cerebral embolism. The patient was apparently well until January 11, 1901. On this date, at 8 p. m., she was seen to fall suddenly to the floor. She did not become wholly unconscious, but there was complete aphasia and a general relaxation of the muscular system. Respiration was normal; pulse 80, and very full; pupils reacted to light. No hemiplegia could be detected and the reflexes were normal. At 10 o'clock the next day there was commencing paralysis on the left side of body and right side of face and there was great difficulty in deglutition. The patient was rapidly becoming unconscious, and there was incontinence of urine. Later in the day she had a marked right-sided hemiplegia. The knee jerks, however, were present; they were equal and apparently normal. There was anaesthesia on the right side. A faint systolic murmur was found at the apex and was traced outward to the posterior axillary line. The temperature

was 101 F., the pulse 144 per minute, and the respirations 32.

On the 13th improvement was noticeable. There was a partial return of consciousness and a less general paralysis. Difference in the lines of the face was especially noticeable. Improvement continued. She took nourishment well. On the 15th she again became unconscious, with a well marked right hemiplegia, and in addition much pain when any part of her body was moved, evidenced by the expression of her face. There was, however, complete loss of skin sensation to pain. Touch, heat and cold sensation could not be ascertained on account of the mental condition of the patient. Temperature 101-102 F., pulse 130, full and bounding, respiration 40. On the 16th, the patient developed a severe diarrhea, with offensive stools. Temperature 100 F., pulse 130, respiration 28. On the 17th and 18th she grew steadily weaker, although on the evening of the 18th she seemed to rally a little, but still had great pain when her body was moved. On the 18th there was less diarrhea. She was more conscious, took nourishment well, and occasionally asked for water. The hemiplegia and anaesthesia were still marked. There was pain on movement. The temperature was 1 degree higher on the paralysed side. On the 19th and 20th diarrhea began anew and the patient sank rapidly. On the 22d the following notes were made: Tongue dry and parched; respiration stertorous and of the Cheyne-Stoke variety; pulse 158, irregular in force and rhythm, easily compressible; artery wall very thick. Relaxation of the entire muscular system, but much more marked on the right side of the body and face. The left ala nasi dilates more widely than the right one. General anaesthesia and analgesia. Reflexes all absent. Heart dullness considerably increased, sounds were irregular and a faint systolic murmur was found with its maximum intensity at the apex and traceable outward to the posterior axillary line. Otherwise the examination of the body was negative. The patient died shortly after noon on this day. Autopsy: Scalp and ears normal. Thickness of scalp at vertex 1 cm. The scalp was not abnormally adherent to the skull. The dura mater was very firmly adherent to the frontal bone, also in places to the occipital bone, and portions of this membrane were torn away in removing the bone. The skull was normal in shape, the out-

lines of the sutures were all obliterated. The vessels of the dura mater were mostly empty and there was noticeable absence of pacchionian bodies. On the left side of the parietal region an area was observed extending 1.5 cm. above the cut margin of the skull. On stripping the dura over this area, clear, light, straw colored fluid burst forth with some force. The opening from which this came communicated directly with the lateral ventricle on this side. The exit of this fluid allowed a very noticeable collapse of the hemisphere to occur. After removing the dura entirely, the left hemisphere was quite depressed over the Rolandic area. The convolutions here were extremely flattened and in marked contrast with those of the opposite side, which latter were well rounded but considerably atrophied. The vessels over both hemispheres in the dependent parts were filled.

The weight of the encephalon, minus fluid, was 1150 grms.

The weight of the cerebellum, pons and medulla, was 108 grms.

The weight of the right hemisphere, minus fluid, was 510 grms.

The weight of the left hemisphere, minus fluid, was 490 grms.

In the left extremity of the granular portion of the hypophysis there was a small abscess about twice the size of a pin head. The dependent sinuses on both sides were well filled with fluid blood and in the inferior petrosal sinus, on the right side, there was found a firm fibrinous clot, 1x3 cm. in size. The sinus itself was considerably dilated, measured 8x10 mm. in diameter.

Over the orbital plates of the frontal bone the dura was exceedingly thin. Over the rest of the base it was more adherent than normal. The carotid arteries were very thin and calcareous and the vertebrals and basilar arteries had numerous very noticeable patches of thickening. The epiphysis was apparently normal.

On removing the brain, there was found a wide gap in the temporal lobe, measuring 7.5 cm. in length; the upper part of this was the dark patch noted in the examination of the dura. This had for its wall, in the part that had not burst through, only the ependyma of the ventricle. Through this gap the

inner wall of the lateral ventricle could be seen, its vessels injected and having ridges corresponding to the sulci, above and beneath. The dilatation was mainly in the descending horn of the ventricle, and there was only 7 mms. of brain substance between the ventricle and the fissure of Sylvius. The middle cerebral arteries traced to their extremities on both sides were patent throughout, but had numerous patches of sclerosis. There was no area of sclerosis to be felt over the surface of either hemisphere. There was no excess of fluid in the right ventricle. No granulations on the floor of either lateral ventricle. No microscopical lesions were found in the right hemisphere or its basal ganglia, excepting the atrophy noted above. The left hemisphere cut with more difficulty but the basal ganglia were here also apparently normal. Sections through the pons, cerebellum and medulla revealed nothing abnormal. The foramen of Munro was patent; also the iter, the foramen of Magendie and the straight sinus. The left vein of Galen was exceedingly small, scarcely 1 mm. in diameter. The right was about 3mm. in diameter. The choroid plexus, on the left side, was about twice the size of that on the right, and was quite firm with numerous black spots showing on cross section.

The bacteriological study of cultures taken from the heart, spleen, kidney, liver, blood and cerebro-spinal fluid were all negative at the expiration of three days.

Case No. 2, female, aged 39, admitted August 10, 1911.

The history of the case was rather unsatisfactory because the husband of the patient was rather ignorant and knew very little of his wife previous to their marriage. When received she was in a state of catatonic stupor. Had been bed-fast ever since admission to the institution and apparently unconscious of her surroundings. At times came out of this stupor for a few moments, but when questioned, she did not comprehend her surroundings. No manifestations of delusions. At times the patient could only be aroused by some such stimulus as pricking with a pin. Some tendency to mannerism, as frequent winking of the eyes and facial grimacing. No catatonic attitudes.

Husband stated that the patient had two sisters and one brother who had been insane. Grandmother of the patient was also considered very peculiar and was possibly insane. One

sister committed suicide by taking carbolic acid.

Husband did not know her history previous to their marriage ten years ago. Said that she was always moody and very seclusive. Five years ago she had a severe attack of stomach trouble accompanied with vomiting. At that time she suffered much from constipation. Occasionally she would have "spells" in which she would remain unconscious for about an hour. These attacks were not accompanied with convulsions.

She had worried much since her sister committed suicide and always feared that her sister's ghost would haunt her. Present mental disturbance came on rather suddenly. Last June she wandered away from home in a confused condition. She acted very strangely after that and soon again fell into one of these deep stupors. She revived just before being brought to the institution, but a few days later she again went into a stuporous state. She at times gave evidence of having numerous hallucinations, but they were very transitory in character.

Physical examination shortly after admission showed that she had sensory disturbance throughout the entire body. There were hypalgesias and analgesias. Pricking with a pin caused very little response, and cornea reflex was absent. Patella reflexes were slightly diminished, but pupillary reflexes were normal.

She presented an extremely toxic appearance. The breath was foul and the tongue was much coated. The case presented symptoms similar to those of the infective-exhaustion group of psychoses, but there was no history of any acute or infectious disease. On September 17th she had an attack of herpeszoster extending from the median line along the 10th and 11th ribs to the vertebral column.

Examination of the urine at various times showed albumen and numerous hyaline casts.

On September 20, 1911, she developed a partial left-sided hemiplegia. This condition came on during the night. The face was but little involved. The paralysis disappeared in about ten days. She did not at that time lose consciousness. She would not speak but she performed numerous commanded movements, such as sticking out the tongue, raising her hand to her head, etc. There was analgesia on the side of the paraly-

sis and loss of the conjunctival reflex was one of the most pronounced symptoms. This reflex was never restored. In consequence of this she had a continuous conjunctivitis. There were no tremors. Examination for coordination could not be made.

Pupils became unequal, and their reaction was somewhat sluggish. Patella reflexes were somewhat increased on the left side and about normal on the right. Marked ankle clonus and tendency to Babinski phenomenon of the side of paralysis. At this time she was in a state of partial unconsciousness. On one occasion she recognized her husband and called him by name.

On October 4, 1911, there was a sudden and high rise of temperature (104), respiration was 40. There was delirium, pulse was 130 and rather feeble. Physical examination revealed an area of dullness posteriorly along the spine, and numerous crepitant rales and friction sounds. The involvement appeared to be more on the left side than on the right (pneumonia.) One week later she appeared much better. There was evidence of resolution. Respiration was normal and the temperature fell to 100. She appeared to be better than she was previous to her hemiplegic attack.

On October 16th there was noticed a decided change for the worse. She became profoundly comatose; would not react at all to external stimuli, and had great difficulty in swallowing.

Reflexes became lost and patient never came out of the stupor. Heart's action very rapid and feeble. Death ensued from gradual exhaustion. Repeated examination of urine showed large quantities of albumen,

Patient died on October 18, 1911.

Brain weighed 1380 grms. and showed an enormous dilatation of both ventricles as will be noted in figure 1.

Case No. 3, female, aged 38, was a case of external bilateral hydrocephalus. This patient was admitted to the institution August 23, 1899 and died October 27, 1911.

She was an imbecile as a child and was never capable of learning. At the 15th year of age she began to have severe headaches, with gradual and increasing impairment of vision. These headaches persisted for ten years and were not relieved by any sort of medication. At about the age of 32, the patient became

completely blind and ophthalmoscopic examination revealed choked disks and optic atrophy. Dementia gradually ensued. Before death her mind was a complete blank. All of the other special senses became involved, especially that of hearing. Early in the disease she presented some incoordination, especially of the lower extremities, but there were never any tremors noted. Vomiting also occurred early in the disease with other evidences of intra-cranial pressure.

Post mortem examination revealed bilateral external hydrocephalus in consequence of an obstruction to the venous circulation which was due to a congenital narrowing of the jugular foramen. All the veins of the brain were much engorged and enormously distended. Optic tracts much atrophied.

Case No. 4, female aged 65, admitted from the County House, September, 1897, as a case of chronic mania and died suddenly July 12, 1911. Patient during residence in the institution showed marked mental deterioration and was incapable of giving any intelligent history. Aside from dementia nothing special was noted except a slight external strabismus and a gradual impairment of vision. Patient's forehead was rather prominent. Nothing of the family history or early history of the case could be ascertained except that she had one brother who had had convulsions.

At autopsy, July 12, 1911, the skull was found to be very thin. The brain bulged and there was about two pints of clear fluid in the ventricles (internal hydrocephalus). (See Fig. 2.)

Case No. 5., male, aged 34, admitted as a case of acute mania and died suddenly apparently from acute maniacal exhaustion. No physical manifestations of intra-cranial pressure were noted and at autopsy there was revealed a moderate internal hydrocephalus.

Case No. 6, (Fig. 3), is a male 23 years of age, admitted January 31, 1912.

Patient's father died of apoplexy; mother still living; four brothers and four sisters living; one brother a patient second time in this institution.

Patient is the youngest child. Nothing very reliable as to the early history could be ascertained. Did not enter school until he was eight years of age and continued in school about

four terms. Was very backward as a child. Was generally in a class with very much smaller children and on account of his difficulty in learning was taken out of school early.

At the age of ten he was kicked by a horse but was only slightly dazed and not rendered unconscious. He generally worked about his home, and livery barns and on race tracks. Would drink quite heavily at times, and on several occasions had taken wood alcohol. He shows marked lack of mental and physical development. Stated that several times during his life had had convulsions, but nothing definite in this respect could be learned from him. The last attack was so long ago that he could not remember the date. Has an imbecilic countenance and has probably been defective from birth. He was here for a short period in 1909-1910. He had frequent occipital headaches.

He has gradually become blind. His hearing has become defective and there is no disturbance of taste and smell.

At the present time he presents very marked dementia, frequently loses his way and has become completely incapacitated on account of his blindness. No delusions could be ascertained.

Patient's eyes are rather prominent and there is a slight bilateral strabismus. Pupils are very much dilated. They react to very strong light but immediately resume the former dilated condition. Patella reflexes are somewhat increased. There is a slight tendency to ankle clonus on the right side. Plantar reflexes are very active. No Babinski. No history of vomiting at any time during the course of the disease. Marked Romberg symptoms and a decided ataxic gait, which appears to assume a cerebellar type. Lumbar puncture reveals an increase in cerebro-spinal fluid. Fluid content and normal. Patient is still living.

Case 7, adult male. Psychosis organic dementia. Duration of psychosis, 3 years. Cause of death pneumonia. Admitted April 29, 1905. Mental condition, prior to illness which brought him here, fairly good. Intemperate and addicted to excessive venery. Shot himself in the side fifteen years ago. Four weeks previous to admission was on a river steamer which sank; after which incident his mind failed. On admission was

maniacal, talked wildly, said he was "hoodooed." Gradually drifted into dementia. Always noisy and restless. Physical condition on admission fairly good. Lame in right leg. Gradually failed; lost weight and strength. Confined to bed most of the time since admission. Incontinence of urine and faeces and dyspnea were the most marked symptoms of recent illness. Physical examination January 8, 1908: listless, anxious and staring expression; pale; lower limbs oedematous, glossy cyanosed distals. Piping voice, incoherent speech. Pupils equal and react to light and accommodation. Lungs negative. First heart sound was sharp and short and not strong. Tendon reflexes much impaired. Muscular power much impaired. Old fracture below right knee.

Death, February 27, 1908. Autopsy showed fatty and flabby heart. Mitral and tricuspid sclerosis, sclerosis and atheroma of arch and thoracic and abdominal portions of aorta, Sclerosis of coronaries.

Large quantities of fluid in subdural space. Pia-arachnoid oedematous and space filled with fluid. Cerebrum oedematous. Veins and arteries injected. Lateral ventricles distended with clear fluid. Choroid plexuses cystic. Microscopical examination showed posterior and lateral sclerosis of cord.

Case No. 8, female, age 56, was a case of chronic mania. Condition passed into dementia. Gradually declined in health six months prior to death. There was loss of weight, occasional oedema of ankles and puffiness of eyes. Frequently had attacks of syncope with feeble heart action but no murmur. Coma for last two days preceding death.

Autopsy showed dura mater slightly thickened; fluid in subdural space markedly excessive. Slight sclerosis of vessels. Injection of arterioles. Convolutions of cerebrum small and flattened. Brain weight 1089 grms. Lateral ventricles enlarged both sides equally.

Case No. 9, male, age 40. Psychosis organic dementia, duration two years. Cause of death myocarditis. About eight months previous to admission began to wander about aimlessly and had to be cared for as a child. After admission gradually grew worse, could answer no questions. Also failed physically. Confined to bed and entirely helpless.

Physical examination a month previous to death: Speaks but little, dull expression, pupils unequal, right eye closed part of the time; tongue rather flabby and movable in all directions; spine somewhat rigid; lower part of trunk and lower limbs turned somewhat to the right; tendon reflexes in lower limbs absent; both limbs paralyzed and contracted at hip; extreme contracture at knees; feet drop.

Autopsy: slight tricuspid and mitral sclerosis. Atheroma of aorta, (arch and thoracic and abdominal.) Moderate sclerosis of coronaries with atheromatous patches. Fluid in subdural space somewhat excessive. Pia-arachnoid distended with fluid and more or less opaque. Convolutions of cerebrum somewhat flattened. Lateral ventricles distended with fluid and somewhat dilated. Choroid plexuses oedematous. Dura of cord slightly adherent to pia in cervical region. Cord rather firm and smaller than average. Microscopical findings in cord as follows: lumbar cord, degeneration of posterior root zones; entire column of Burdach not involved; thoracic cord, similar changes with some degeneration of the crossed pyramidal tracts; cervical cord, marked degeneration with sclerosis in posterior root zones; pons and cerebral zones negative with Pal-Weigert; Nissl stain shows some chromatolysis in cells of cerebral cortex.

Case 10, a case of paresis, male, age 58. Physical examination a year prior to death: Insane ear upon left side; expression of eyes and face blank; speech none, voice paretic like (at this time and passed into dementia). Pupils unequal, the right pupil does not react to light, the left reacts slightly to light, both react to accommodation; superficial and deep reflexes prompt; no paralysis; gait paretic-spastic; tremors and muscular twitchings of lips. Spinal column deviated to right; skull softer and thinner than normal; dura normal; pia-arachnoid opaque and glistening, and there was oedema; excess of cerebro-spinal fluid; weight of brain 1110 grms. There are two depressions over the left frontal hemisphere near the longitudinal fissures and close to the fissure of Rolando. Similar depression over the right frontal hemisphere. Convolutions in region of paracentral lobe of left side are flat and wide and fissures are deep and prominent. Lateral ventricles dilated and contain

excess of fluid. Foramen of Munro dilated. Choroid plexuses cystic. Microscopical examination sections from para-central lobes stain with toluidin blue show pia containing lymphoid cells and lymphoid infiltration around vessels. Cord negative with Pal-Weigert.

The following is a summary of the more important conclusions.

1. Internal hydrocephalus may be confined to a single hemisphere.

2. The acuteness and gravity of symptoms depend largely upon the degree of pressure.

3. Differentiation from tumor at times quite difficult.

4. Many cases described as "idiopathic" acute internal hydrocephalus in adults, on post mortem examination, show that in reality they are connected with some old abnormal condition of the nervous system.

5. Recurrent transitory hemiplegic attacks noted in two cases.

6. Marked and progressive dementia in six cases.

7. Pronounced arterio-sclerosis in three cases.

8. Hereditary history in three cases.

9. One case presented the clinical picture of the infective exhaustion group of psychoses.

10. In one case there was marked atrophy of the optic tracts and optic chiasm in consequence of special pressure exerted.

11. In two cases all the special senses were involved, in one of which there was complete anosmia and also loss of taste.

12. In one case there were convulsive seizures which were very likely due to sudden increase of intraventricular pressure acting through the floor of the fourth ventricle.

13. Albumen and casts noted in urine in one case.

14. Transitory stupor in two cases.

15. Sudden death in two cases.

16. Internal hydrocephalus due to localized serous meningeal or ependymal inflammation is in many ways analogous to cases of serous effusion into the pleura or peritoneum resulting from localized non-suppurative pleurisy or peritonitis.

17. Three cases showed marked congenital defective states.

18. Optic neuritis and complete blindness in two cases.
19. Prominence of eye-balls and strabismus in two cases.
20. Moderate internal hydrocephalus noted at autopsy in one case of acute mania, one of chronic mania, one of paresis, and two of organic dementia.
21. Chronic and persistent use of wood alcohol apparent cause in one case.
22. Posterior and lateral sclerosis noted in one case and degeneration in posterior root zones in one case.
23. Complete paraplegia with contracture of lower limbs in one case.
24. Nissl stain showed some chromatolysis in cells of cerebral cortex in one case.

I desire to express my indebtedness to Dr. O. Evermann for the accompanying photographs and also to Dr. E. D. Martin for assistance in the pathological findings.

FIGURE 1



Dilatation of the lateral ventricles. Patient presented transitory stuporous attacks and later transitory left sided hemiplegic attacks of but four months duration. Previously there were no other symptoms noted.

FIGURE 2



Enormous dilatation of the lateral ventricles. Patient presented marked dementia but with no pronounced symptoms of intracranial pressure. Probably congenital as there was decided macrocephaly. Death sudden. Age at death, 65 years.

FIGURE 3



Internal hydrocephalus. Total acquired blindness and partial deafness. Slight internal strabismus of the right eye. Both eyeballs bulged. For past year pronounced symptoms of intracranial pressure. Taste and smell unimpaired.

SELECTIONS.

CLINICAL NEUROLOGY.

PARALYSIES GENERALES RAPIDES, by Prof. J. Lepine, Lyons.—In this clinical lecture Prof. Lepine discusses the question of the duration of general paralysis. The opinions of the various authors who have written on this subject are greatly different, some of them considering that a year or a year and a half is the most common duration of the disease, while others state that death occurs only after five years or more. About one-tenth of the cases seen by Prof. Lepine had a very rapid evolution less than a year. According to Prof. Lepine's experience the cases which have such rapid evolution may be divided into three main classes. First class: "intellectuals," i. e., patients whose brain has had severe and prolonged overwork; among these, patients belonging to liberal professions are very frequently met with. Second class: patients without over work, but with irregular hygiene, like railway officials or omnibus drivers. Third class: syphilitic patients whose mercurial treatment has not been carefully conducted or supervised. These patients have neglected Prof. Fournier's advice: "Energetic treatment at the beginning, safety treatment in the latter stages and rest during the intervals."

To sum up, Prof. Lepine thinks that if the average duration of g. p. seems to be longer nowadays it is because we are able to make an early diagnosis; conversely there seems to be nowadays an increase in the number of the cases with a rapid evolution.

Progres Medical, 25 Novembre, 1911. A. E. E. REBOUL,
M. D. L. R. C. P. & S., Edin. etc.
Fellow of the Royal Society of
Medicine.

CONSIDER THE LIVER.—We must confess to having been rather startled by one phrase in a paper by that prolific and generally dependable writer, Dr. Woods Hutchinson, which appeared in the *Saturday Evening Post* of March 2d. Never before have we seen the statement that the liver while performing its normal function manufactures prussic acid. We have had no opportunity of confirming the statement, but we can hardly believe that the doctor would have made it had he abundant proof of its truth. But what a distressing field of possibility this opens up. Suppose that the liver does secrete its prussic acid and, through some hitch, fails to immediately convert it into other and innocuous substances? The possessor of the liver gets his and the acid is found on autopsy and, there being no one there to tell on the liver, some one else gets the blame! We would suggest to the friends of Dr. B. Clark Hyde that this subject be immediately and thoroughly looked into.
—*Medical Fortnightly Editorial.*

NEUROTHERAPY.

DIET IN HIGH BLOOD PRESSURE.—Eustic of New Orleans in *Southern Medical Journal* attributes this condition to toxemia. From successful personal experimentation with low proteid diet exclusive of tyrotoxin producing substances and stimulating elimination by catharsis and free and plentiful water drinking is indicated, unless the heart muscle is not functioning properly.

THE ASEXUALIZATION OF THE UNFIT.—This is a measure which has received much attention and it is likely to be largely employed in the future, its advocacy by Barr (*The Alienist and Neurologist*) with a report of results observed is interesting.

At the Indiana Reformatory at Jeffersonville, Dr. Harry C. Sharp has vasectomied some 500 males (176 operated upon at their own request) and in each and every case the results have been most gratifying.

In a very recent personal study of 7 oophorectomies, 5 vasectomies and 13 castrations, there has been decided mental, moral and physical improvement. In every case there was

advance, noticeably in the castrations; both sexes becoming brighter mentally and dispositions more amiable.

In the vasectomied the sexual desires are held in abeyance, although masturbation is occasional. The semen, however, is innocuous and under the microscope shows no spermatozoa. On the whole the individual is more tractable, and there is a marked change for the better in both behavior and disposition.

It may doubtless be urged by some that such a law might be abused. There is no reason, however, why it should not be so safe-guarded as to achieve the greatest good to the greatest number without abuse. In no case would he advise the indiscriminate use of the knife, nor a license for physicians in general practice to act without proper authority.

The operation should be permissible only after ample period for study of and testing by accredited alienists and surgeons, and this is best attained in the grouping of numbers by separation and segregation.—*American Journal Dermatol.*

ORGANIC AND INORGANIC PHOSPHORUS COMPOUNDS.—Fingling's experiments as to the relative value of various organic and inorganic phosphorus compounds—lecithin, phytin, nucleoprotein, casein, nucleic acid and disodium phosphate—in the production of milk. Experimenting on goats the materials to be tested were added to a ration already deficient in phosphorus, thus giving every opportunity for special advantages to manifest themselves. It was found that none of the substances exerted any specific influence whatever on the activity of the mammary glands. Neither the quantity of milk nor its individual constituents were increased. Thus we have another proof that the animal organism can satisfy its need of phosphorus adequately by means of inorganic phosphates. (Abstract from *Jour. A. M. A.*, May 25, 1912, p. 1605.)

THE CLINICAL VALUE OF CARDIOVASCULAR DRUGS, relative efficiency and toleration of natural and synthetic salicylates. Duration of action and absorption of Digitalis bodies. Efficiency of intestinal antiseptics, therapeutics of phosphorus compounds, standardization of antiseptics and germicides, pharmacology of commercial vanadium preparations, effects of origin and impurities on toxicity of chloroform, and fate, efficiency

and side actions of organic iodids are discussed in *Jour. A. M. A.*, May 4, 1912, p. 1390.

WATER AT MEALS.—Cohnheim, of Heidelberg, has shown that when water is drunk at meal time, it does not mingle with the solid food, but a funnel is formed by the horseshoe-shaped band of muscle along the lesser curvature of the stomach, and the water is quickly discharged into the duodenum. This, if true, would indicate that there is not the danger sometimes feared of diluting the digestive fluid by an occasional sip during meals. —*The Medical Summary*.

FOOD VALUE OF EGGS.—Recent experiments by S. Aufrecht and F. Simon (*Pharm. Journ.*, No. 2382, p. 795) show that the food value of eggs is not appreciated as highly as it deserves; eggs deserve to be much used, both in disease and in health, on account of the ease with which they are digested, their high food value, and the extent to which they are absorbed. Personal experiment has shown that when under a mixed or meat diet the absorption of nitrogen was least; it was increased with a regimen of lightly cooked eggs, and slightly further increased when the food was limited to raw eggs. Uncooked eggs show only a very slightly greater food value than those lightly cooked. The amount of fat which passed through the body unabsorbed under a diet of meat, cooked eggs, and raw eggs was 14.39, 6.25, and 4.09 per cent of the quantity administered in each case. The unabsorbed nitrogen amounted to 5.22, 3.81 and 3.1 per cent, respectively. Eggs have a markedly higher food value in a mixed diet than a corresponding quantity of meat. *Therapeutic Digest*.

Eggs are excellent nutrient adjuncts to lecithin in neurotherapy.

GLYCOSURIA AS THE RESULT OF NERVOUS SHOCK.—The *Therapeutic Gazette* thus interestingly and instructively presents this subject.

"From time to time clinicians meet with cases of glycosuria or diabetes which seem to be due to a nervous shock, as, for example, that which results from a railroad accident. More commonly they meet with instances in which the glycosuria apparently develops as a result of more or less prolonged nervous stress, as in women who suffer great bereavement after

long weeks of nursing, or in business men who are severely strained by financial disaster. In some instances, too, it develops as the result of severe illness. In all of these cases the glycosuria may be but temporary or become permanent, and finally develop into a true diabetes. While the symptoms in each instance may be the same, it is probable that a certain percentage of these cases have a better prognosis than those which develop glycosuria, or diabetes, as the result of some actual injury, grave disorder or metabolism, or disease of the pancreas, in that rest, and measures commonly associated with it as sedatives and tonics, may result in a readjustment and establishment of normal function.

"An interesting research, indicating that glycosuria may arise as the result of nervous stress and strain, has been contributed to the *American Journal of Physiology* of December 1, 1911, by Cannon, Shohl, and Wright, who have found that when cats are excited for even so short a time as one-half hour by being uncomfortably bound, or by being caged in the presence of a barking dog, they develop glycosuria; whereas pain, cooling, or other supposedly harmful factors fail to produce this result, fright or rage being the essential element. It is also interesting to note that there seems to be a relationship between the functions of the adrenal bodies and the development of the glycosuria under these circumstances, because if the adrenals are carefully removed the glycosuria does not appear even if the source of irritation is maintained three times as long as in other cases although the manifestations of excitement on the part of the animal may be in each instance identical.

"As a matter of collateral interest, although not directly connected with the development of glycosuria as the result of nervous irritation, we may also call attention to a study made by Cannon and Hoskins, recorded in the same journal, in which they point out that there is a great similarity between surgical shock and the condition of an animal after removal of the adrenal bodies. They suggest that the injury which is responsible for the shock results in so great a discharge of their secretion on the part of the adrenal glands that they are unable, for a time at least, to continue their average function, with the result that blood-pressure falls and other symptoms develop. In any

event they seem to have proved that great sensory stimulation causes increased adrenal secretion. The relationship between adrenal function and glycosuria is too complex a problem for us to deal with here, but the two sets of experiments which we have just quoted suggest an interesting line of thought as to the influence of nervous irritation upon adrenal secretion in its relation to glycosuria and surgical shock and as to treatment as well.

PSYCHO-EUGENICS.

HITHERTO MATTER LIKE THE FOLLOWING has appeared under other captions but the importance of this subject to psychiatry has so grown and become so appreciated that we give this important department of scientific study for the welfare and salvation of the race, separate and independent space in our pages.

Sterilization is the modern, scientific method which aims to prevent insanity and criminality instead of dealing with it after it has become hopelessly intrenched. It has been put in operation in New Jersey, Connecticut, Indiana and California, and now New York is added to the list. A board of examiners, made up of one surgeon, one neurologist and one medical examiner, is intrusted with the enforcement of the law. If this board finds that any of certain classes of male criminals and defectives confined in State institutions would transmit to his offspring a tendency to crime, insanity or feeble-mindedness, or that his own mental or physical condition would be improved by the operation, it is to appoint one of its members to perform it.

A tremendous power is conferred on the board, and, in order to prevent the possibility of its abuse, provision is made for a judicial review of the board's findings before the operation can be performed. The mentally defective have increased alarmingly in recent years, New York having at this time 12,000 feeble-minded persons for whom it cares. Aside from the in-

jury done to society by the growth of this class, the financial burden of caring for them would after a while become unbearable.

Sterilization has the support of many physicians, criminologists and members of the judiciary. In theory it is sound and reasonable, and the State has an unquestioned right to protect itself in this way. It has not been tried out long enough as yet to have fully demonstrated its effect upon society. Careful records are being kept, however, and we shall soon have reliable statistics.—*Leslie's Weekly*.

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CHAS. H. HUGHES, M. D., Editor and Publisher.

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EDITORIAL.

[All Unsigned Editorials are written by the Editor.]

PSYCHIATRIC SECURITY IN GENERAL HOSPITALS.—Through the many records of delirious patients going to death through unguarded windows and other inadequate precautions, among them the inalertness of nurses leaving such patients unattended or permitting means of suicide in reach, we are constantly reminded of the ignorant culpability of general hospital attendants and governors as to the neglect of proper safety hospital equipment and attention here.

The brain as an integral part of the body, liable to go wrong in any disease and possible vagaries of mental action in connection therewith, claims consideration with the rest of the body when disease attacks it.

IMMIGRATION SANITATION EUGENICS.—The *Buffalo Medical and Surgical Journal* has concluded a valuable editorial on the subject of foreign immigration.

"What we want in this country is not the admission nor the exclusion of any particular sub-race, but the admission of the best stock, of any and every nationality, best physically, mentally and morally." And so say we all of us in the Medical Profession.

THE CHIEF REASON FOR DIVORCE.—For the eleven hundred and seventy divorces in St. Louis last year, being one-seventh of the total marriages, Archbishop Glennon gives these three reasons, viz: Laxity of the divorce laws; hasty, imprudent and clandestine marriages; marriage regarded as a mere civil contract and not as a solemn sacrament.

But there is another mightier reason than all these and underlying most of them and that is the unstable psychic neuron, rendering brains and minds unfit for the sacred relation and reciprocal duties and obligations. The psychic reflex centers are wrongly endowed and the cerebro-erotic responses to impression in the marital state are inharmonious and the machinery of Love's relations is not rightly engineered.

Nature and Nature's God have not joined these misfits together, though the clergy may have said so and the courts put them asunder.

IF REVEREND RICHESON had lived and been set free to propagate his unstable wicked kind, to add more degenerates to the world, some of them perhaps, in psycho-neurotic better impulse, choosing the sacred ministry of the Gospel as their life calling, how far more profitless, heart harming his life had been! Inexorable law and the electric chair have done the best eugenic deed.

But on the other hand had Richeson lived incarcerated for life he might have saved the sinners to repentance as David did. Who can tell? The once sinning may let in a ray of hope and sunshine to the cell of sin. This is sound psychology.

THE SHAKERS THAT KILLED "Sister" Sadie Marchant and the discussion was "Is murder sometimes permissible?" with the conclusion that "It was not" was the copyrighted conclusion of the *American Journal Examiner*, as to this act and this person, a member of a colony of earnest, ignorant, religious enthusiastic shakers living in a remote corner of Florida, suffering with consumption and wishing to be relieved by death and declared to have been incurable by two of the brethren.

This woman was chloroformed to death but what became of the chloroformers?

Of course the medical profession would answer the *American Journal Examiner* as it did at the time of the unwarranted fatal euthanasia.

THE ASSOCIATION OF NEUROPATHOLOGISTS was formed during the year, chiefly by the pathologists of the State Hospitals of Massachusetts.

A national body would be a good idea in the opinion of the officials of the Taunton State Hospital.

PERSONALITY IN PROFESSORS.—The University of Missouri notes that "there is a feeling among students and some faculty members, too, that students and teacher never come into close enough personal relations."

The professor rarely learns a student's ambitions, hopes, beliefs and pet theories. The student does not always get from the professor the moulding influence of personality and character that closer contact would bring.

It is indeed a strong personality that can span the gap of formality in classroom lectures and recitations. Many professors possess such personality. Men who rarely meet their students at conferences or outside the classroom may still live long in the memory of the student. Where classes are large, personal contact is almost impossible. In the smaller classes the professor can spare more time to each student.

No matter how exerted, the fact of personality is one of the stongest advantages any college has to offer. Graduates remember certain professors long after they have forgotten what the professor so carefully taught them. They remember

him as a man of ideals, as a man of character, as a man to be studied. Few men ever graduate from any school without carrying away with them some such memories, perhaps not of more than one or two professors, but nearly always of some one.

After all, the facts a man gathers at college, the information assimilated, are not the essential points of college training. The average graduate carries away hazy ideas of text-book knowledge.

"But there is that undefinable 'something' that goes to make up the fruits of four years in college; that stamps one as a college man so deeply that clothes or surroundings cannot hide the fact. If it isn't the effect of contact with personality that counts, what is it?"

Certainly the personality of the teacher and the spirit of the teacher count for much in their influence over the character, studious habits and determination of the learner in the line of life work aspiration, especially in medical colleges. These influences count for more, in the making of physicians, than lavishly expensive laboratory equipment and the oppressing environmental suggestion that only great wealth and expenditure and superabundant time for prolonged study make the accomplishment of a medical education a possibility.

NINE YEARS FORCED FEEDING of an insane person was the subject of an interesting paper read at the last February meeting of the British Medico-Psychological Association by Dr. David Blair (Lancaster.) The case was continuously fed by the nasal tube all that time. The longest forced feeding case in the experience of the editor of the *Alienist & Neurologist*, resisted the stomach tube feeding once daily of three eggs and two quarts of milk and some sugar with slight whisky flavor was ninety days; the patient, a case of delusive melancholia without mania, maintaining he had no place to put food, "having lost his stomach" suddenly, recovered after prolonged rest. Brain work and much late night reading had made him delusively psychasthenic. The patient had projected and carried out a great overland stage enterprise and had been a resourceful man of affairs in his well days.

ADVANCE IN SANITARY IDEAS as to railway stations and railway cars continues, which we are glad to note. The associated press announces that the State Railroad Commission has directed that:

Railway stations in Missouri, even in villages of 200 inhabitants, after June 1, must be provided with sanitary conveniences and kept in a clean and healthful condition.

All stations must install water tanks, keep them clean and filled with cool and pure water, and that the agent shall be permitted to keep sanitary cups for sale cheap.

It also provides one cuspidor for each five seats in a waiting room, that must be cleaned once a day, and that a sign prohibiting spitting on the floor must be displayed.

A sign prohibiting spitting and a cuspidor for each five spitters is rather incongruous, nevertheless this sanitary concern for the peoples' health is good, though the above sanitary regulation had better come directly from legislation than that made at the discretion of a commission, for that way lies the danger of tyranny from unwise and unjust and oppressive commission law.

A state sanitary law, specific on this subject for public houses, railway stations, boat landings and conveyances generally would be more in harmony with the fair purposes of our government, National and State.

SAFETY MATCHES AND MATRIMONIAL EUGENICS.—In addition to other precautions against the casualty of fire, asylums or hospitals for the insane provide safety friction matches which will not be likely to strike fire on being stepped upon or otherwise ignited when struck beyond the box.

This safe provision in regard to matches is not common to all matches or in all houses.

The precaution of the safety match should be more general in hotels, ships and homes for protection against those demi-fous who, too generally escaping commitment to insane asylums, thoughtlessly throw lighted matches or flip burning half-smoked cigarettes or lighted cigar stumps anywhere, regardless of the grave conflagrations which so often result from such thoughtless acts.

Then, like unto these, there are those hasty erotic idiots and the otherwise thoughtless, who rush into matrimony with the hereditarily nerve center damaged and otherwise diseased unfit, not knowing that their dreams of conjugal happiness are to be rudely awakened by psychopathic or other morbid shock in the family or individual that would make suicide in utero a blessing to themselves and their posterity forever.

Apropos of our theme it is a hopeful sign of our day, in the line of eugenics, for the human race, that the neuropathic, psychopathic, sexually contaminated and otherwise disease infected are not to be joined in the bond of holy matrimony by certain of the clergy. Clergymen of St. Louis have already so announced.

The church's solemn announcement that "what God has joined together let no man put asunder" is to be reversed, viz: What God and Nature would keep asunder let no man join together.

In this connection therefore the *Alienist and Neurologist* is especially gratified to see Dr. Charles Wood Fassett presenting this important subject to the readers of his widely circulated magazine, the *St. Joseph Medical Herald*, as shown in the following editorial:

PHYSICIANS' APPROVAL TO PRECEDE MARRIAGE.—Dean Walter T. Sumner of the Cathedral of SS. Peter and Paul, Chicago, recently delivered a sermon upon the "Sacrament of Marriage," in which he takes advanced ground in regard to marital relations. His position will meet the hearty approbation of the medical profession. Dean Sumner issued the following edict:

"Beginning with Easter, no persons will be married at the cathedral unless they present a certificate of health from a reputable physician, to the effect that they are normal, physically and mentally, and have neither an incurable or communicable disease."

"This step is taken only after months of study of the situation and deliberation as to its advisability. It is believed that this stand will meet with the immediate sympathy of the clergy in the churches at large, all of whom have long felt the

undesirability of being party to the marriage of persons who, because of their physical condition, should never be allowed to enter into the marriage state and propagate their species."

This is certainly a step in the right direction, and we sincerely hope to see Dean Sumner's excellent example emulated by others in Church authority, and may his sane and sensible policy act as a stimulus to physicians and legislators to continue the good work by introducing and enacting stringent laws in every State, for the purpose of restricting the marriage of the unfit.

The attitude of the Dean of Saints Peter and Paul is right. The "Sacrament of Marriage" should not be disease polluted and eugenics should stand guard before the matrimonial altar. Matrimony should be no melting pot for vicious morbidity. The salvation of the race and the longevity of humanity is concerned in the matter.

THE TITANIC'S MEDICAL HEROES.—After an apt quotation from Byron, the *Medical Record* pays this just tribute to our heroic brethren who went down to death on the Titanic.

"Dr. William F. N. O'Loughlin, the chief surgeon of the ship, was active to the last in the service of others. Buckling life belts on to more than a score of women and carrying many of them to the life boats, calming the frightened passengers, and in every other way striving to create order, the gallant surgeon finally awaited death with resignation. The sea claimed one who had served her faithfully for forty years, one whose ministrations to poor and rich alike had endeared him to thousands of travelers. Several other physicians among the passengers, together with the surgeons of the ship, went down, as thousands of others of our calling have met death in laboratory or lazaretto, or courted it fearlessly on the battlefields of war or of pestilence. All honor to those who shared the watery grave with their precious charges.

MEDICAL SCIENCE AND SANITATION AT PANAMA.—We are indebted to Dr. Winslow Anderson's summary of Panama health matters, based on Col. W. C. Gorgas' splendid work there for what follows.

Were it not for medical science there would be no Panama Canal. During the time that France exerted its best efforts in excavating the Canal from 1880¹ to 1890 with a maximum force of about 10,000 men, in nine years the French lost over 22,000 laborers from yellow fever, malarial fever, dysentery and other endemic tropical diseases. In other words the mortality during the French construction period was over 240 for every thousand persons. With the untiring efforts of William C. Gorgas, M. D., Colonel United States Army and Chief Sanitary Officer of the Isthmian Canal Zone, the mortality has been reduced from over 22,000 in nine years to less than 4,000 in nine years—the French having an average force of about 10,000 men and the United States having an average force of 33,000.

It is not really a canal which the government is building at Panama, but a waterway consisting of lakes, locks, canal and sea approaches at the lowest point in the mountain range extending from Alaska to Patagonia.

COFFEE AND DIVORCE.—The *Medical Record* arraigns the insomniac effect of too much coffee as a neuropathic cause of divorce. Its psychopathic wakefulness engendering properties may cause the caudel lecture, but what makes the caterwaul that breaks in upon one's nightly rest and gives "no sleep till morn" when certain feline sounds come from the back alley or nearby housetop.

OBITUARY.

ISAAC KAUFMANN FUNK, D. D., LL. D., president of The Funk & Wagnalls Co., editor-in-chief of all its publications, including the Standard Dictionary, *The Homiletic Review*, and *The Literary Digest*, fell asleep on the morning of Thursday, April 4, in his seventy-third year. He had just finished the last manuscript copy, after three years' labor, on a new revision of the *Standard Dictionary* when death overtook him.

In his daily life Dr. Funk was a man of rare geniality and warmth of soul. In the midst of labors that would have distracted and harassed the average man of half his years, he was

never too busy to see the humblest employee of his firm or to exchange anecdotes with an old acquaintance. And through it all his aims, moral and intellectual, were noble. He was "a versatile American," says the *New York World*, and he "must be credited with a real and definite contribution to the advancement of public morals and popular intelligence."

His life work was always well and ardently done and finished when he fell.

The world of true literature and science owes much to him for his assiduous and effective efforts to disseminate knowledge thereof.

REVIEWS, BOOK NOTICES, REPRINTS, ETC.

THE PROBLEM OF RACE REGENERATION BY HAVELOCK ELLIS.

NEW YORK, MOFFATT GARD & CO., 1912.—The trend of this vividly written book which is one of the "New Tracts for the Times," appearing under the auspices of the Bishops of the Church of England, is on the favorite lines of the Eugenists.

"We have been," remarks Dr. Ellis, "expending enormous enthusiasm, labor and money in improving the conditions of life with the notion in our heads that we should thereby be improving life itself and after seventy years we find no convincing proof that the quality of our people is one whit better than it was when for a large part they lived in filth, were ravaged by disease, bred at random, soaked themselves in alcohol and took no thought of the morrow." This seems but the re-echo of the old plaint of Burton, the "Anatomist of Melancholy," uttered nearly three centuries ago.

So many several ways are we plagued and published for our father's defaults, in so much that as Fernelius truly saith: "It is the greatest part of our felicity to be well born and it were happy for human kind if only such parents as are sound of body and mind should be suffered to marry." An husbandman will sow none but the best and choicest seed upon his land; he will not rear a bull or a horse except he be right shapen in all parts, or permit him to cover a mare except he be well assured of his breed; we make choice of the best rams for our sheep, rear the neatest kine and keep the best dogs *quanto id diligentius in procreandis liberis observandum*. And how careful then should we be in begetting of our children. In former times some countries have been so chary in this belief,

so stern, that if a child were crooked or deformed in body or mind, they made him away; so did the Indians of old by the relations of Curtius and many other well-governed commonwealths according to the discipline of those times. Heretofore in Scotland, saith Heat Boethius, if any were visited with the falling sickness, madness, gout, leprosy, or any such dangerous diseases which was likely to be propagated from the father to the son, he was instantly gelded, a woman kept from all company of men and if by chance having some such disease, she was found to be with child, she with her brood were buried alive and this was done for the common good lest the whole nation should be injured or corrupted. A severe doom you will say, and not to be used among Christians, yet more to be looked into than it is. For now by our too much facility in this kind in giving way for all to marry that will, too much liberty and indulgence in tolerating all sorts, there is a vast confusion of hereditary diseases, no family secure, no man almost free from some grievous infirmity or other when no choice is had, but still the eldest must marry as so many stallions of the race; or if rich, be they fools or dizzards, lame or maimed, unable, intemperate, dissolute, exhausted through riot, they must be wise and able by inheritance. It comes to pass that our generation is corrupt, we have many weak persons both in body and mind, many feral diseases raging among us, crazed families; our fathers bad and we are like to be worse."

Judging from the picture drawn by Macaulay of English social conditions at the death of Charles II, (1685), Ellis portrait is shaded with peculiar pessimistic gloom by its unconscious disregard of the law of relativity. There were in 1685 all and more than all of the abuses that are considered peculiar to the 19th century. There is a song of the sweaters (History of England, Vol. II) which might have been written in 1890 in New York by the striking Garment Workers.

The conclusion of Macaulay fifty-eight years ago that "the more carefully we examine the history of the past the more reason we shall find to dissent from those who imagine that our age has been fruitful of new social evils. The truth is the evils are, with scarcely an exception, old. That which is new is the intelligence which discerns and the humanity which remedies

them" is demonstrably nearer correctness today than when Macaulay wrote. The trouble with the Eugenist view-point is that it ignores the enormous influence of environment at the periods of stress and deals only with the product of conception as determined by parental strength or weakness. The Anstolleon law of economy of growth, as expressed in the Roux struggle for existence between the organs, determined by the evolution by atrophy of DeMoor, especially as shown in the coexistence of mental and moral power with degeneracy stigmata, conflicts with this Eugenist position. Even the seeming elements of heredity supporting it do not exclude the influence of parental environment at the periods of stress. As a forcible statement of the position of the Eugenists Dr. Ellis' book merits purchase and perusal by physician and patient.

JAS. G. KIERNAN.

DEVELOPMENT PATHOLOGY BY E. S. TALBOT, M. A., D. D., S., M. D., L L. D., BOSTON, MASS., R. G. BADGER, 1911.

The object of this book, as stated in the preface, is to show: First that the ontogeny of Man, his structures, and organs is a modified recapitulation of his phylogeny in development. Second; that as the vertebral phase appears early in embryogeny, an unstable nervous system checked by parental defects, eruptive fevers and other agencies at the periods of stress in the child affects phylogeny and ontogeny. The book therefore aims to correct rather too prevalent erroneous conceptions of heredity by showing that neither excessive nor arrested development is inherited directly from the parents. Human heredity cannot be considered to any purpose without taking into account intrauterine education, environment and development. Developmental pathology, while rather extensively considered in the domain of tumors, in osteology (cervical ribs, etc.), liver abnormalities and orthopedics, has not received the attention which its relation to the etiologic moment of disease merits. It is the domain of pathology which deals with departures of structures and organs from the normal along the line of arrests of foetal development, either in structure or in the biochemical states underlying functions or potentialities of development at given periods of growth. The two great phases of develop-

ment (ontogeny, individual development; and phylogeny or race development) have not heretofore been employed in the analysis of these states as they should have been. Ontogeny, as Dr. Talbot points, does not repeat all the stages of phylogeny but assumes the essential characters of the race rapidly.

Very frequently, therefore, the lower phases of phylogeny are represented by potentialities capable of development rather than by the phylogenetic structures themselves. The developmental pathology trend of the alienists of the 80's and early 90's has been, rather unprofitably, replaced by the mesmero-metaphysical trend of the Kraepelin-Freud school. This rather ignores the essential constitutional factor of the etiologic moment, laying, like Mesmer, most stress on the psychologic exciting cause. The general principles of embryogeny and postnatal development are clearly outlined by Dr. Talbot and the work is replete with demonstrative illustrations. The style is clear and vivid. The illustrations are numerous and pertinent. The book is an excellent guide to embryogenic factors in individual, race, and social development. It is well issued by the publisher.

JAS. G. KIERNAN.

THE PROCEEDINGS OF THE AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION, always interesting and supplemental to the work of the alienist and neurologist as the American Journal of Insanity is, comes to us neatly bound, profitably filled and prefaced with the handsome, healthy, hopeful and intelligent face of Dr. Pilgrim, the worthy president of this worthy association.

The only error we note on scanning these proceedings is our personal location, which should be 3858 West Pine Boulevard instead of 3872 Washington Ave., St. Louis, where we formerly were located.

We regret to note that State Hospitals number one, two, three and four and St. Vincent's have no representative membership in the great psychiatric school for the clinical alienist. In those days when the editor of this magazine was young and presiding over the destiny of those study days for him in alienism, his Board of Managers granted him an annual six weeks leave of absence

and two hundred dollars to part pay his expenses. The association met then in some place where there was an institution to be visited and one day was set apart usually. It was a good way of making practical psychiatrists of the newly appointed superintendents, generally selected from general practitioners, experienced as assistants, who had had an all around medical experience.

I think these vacations, if employed in the old way by medical heads of hospitals at the expense of the institutions, would prove profitable to all concerned and amply repay the outlay in the current expense account.

The president's address is characteristically in keeping with his ability and psychiatric zeal. It rings true of the true psychiatrist.

Passing over the entertaining and humorous address of the invited guest, Hon. Alva Adams, we note the well illustrated study of miliary plaques by Sol. C. Fuller as the most elaborate and painstaking and the practical contribution to the hereditary psychoses, "A Manic Depressive Family," by McGaffin, Insane Military Offences by Richards, Richardson's Imprisonment Psychoses, Eyeman and O'Brien, Serum Reactions, Problems of General Paralysis with Focal Symptoms by Macfie Campbell, Hammond's Considerations of Aphasia, Given's Prevention of Causes of Insanity, The Psychology of Morphinism. Elnora Saunders, J. W. Babcock, C. C. Bass, J. W. Mobley and Geo. A. Zeller each present instructive views concerning Pellagra but we have not noticed any reference to the report of Dr. Gray, of Utica, on the presence of this disease in the Utica Asylum far back before the reports of later decades on Pellagra in the United States.

NATIONAL COMMITTEE FOR MENTAL HYGIENE.—At the New York meeting of the organization, February 17, there was acknowledgment of an out-and-out gift of \$50,000, together with the presentation of a second \$50,000, made contingent upon the raising of \$200,000.

The bestowal of these sums inaugurates a national movement for mental health. This movement contemplates improvement for the insane and instruction of the sane on the sub-

ject of mental disorders, their cause, prevention and cure. Dr. William L. Russell, superintendent of the Bloomingdale Hospital, and Dr. Thomas W. Salmon of the P. H. and M. H. S. will begin active work of the organization from the office at 50 Union Square. Officers were elected as follows: President, Dr. Llewellys F. Barker, Johns Hopkins University; vice-presidents, Dr. William H. Welch, Johns Hopkins Medical School, Dr. Charles P. Bancroft, superintendent of the New Hampshire State Hospital; treasurer, Otto T. Bannard; chairman of the executive committee, Dr. George Blumer, dean of the Yale Medical School; chairman of the finance committee, Russell H. Chittenden, director of the Scientific School, Yale University; secretary, Clifford W. Beers.

If there is any department of medicine upon which the public is now in dense ignorance, it is the matter of mental disease. Clouded in obscurity, hidden in a conjectural haze, mental disease is not understood by the public to be preventable, curable or amenable to public and private intelligence.

Hand in hand with the improvement in this field goes the matter of enlightenment on the subject of procreation in the criminal and otherwise mentally unfit.

PSYCHOANALYSIS: A REVIEW OF CURRENT LITERATURE BY J. S. VAN TESLAAR IN THE AMERICAN JOURNAL OF PSYCHOLOGY.—This is an interesting, instructive and painstaking labor saving selection of abstracts concerning dream-land psychology, especially in regard to both realities and the vagaries of Freudism.

Freud does not adequately account entero-cerebral and other viscerocerebral excitations beyond the sphere of what he (Freud) erroneously attributes to the sexuality of infancy, the distended bladder irritations that cause penile erections and the flatus stretched bowels which distort the infantile features and those gastro-enteric conditions that cause the infants to sometimes smile and doting mothers to misinterpret their darlings' faces as revealing angel converse. Freud's kinder dreams, if preceded by light digested evening meals and emptied bowels and bladder, would be more significant by their absence. There

are more and better interpretations for many of Freud's conclusions than premature infantile sexuality.

In our observation and experience Freud is far off from the fact. His erogenous assumptions are often far off from the physiological fact. It is absurd to class the desire of infants to disrobe and enjoy the stimulating impression of fresh air on the skin with the morbid exhibitionism of later year sexual perverts.

Freud is more rationally scientific when he gets into the dreamland field of adult erotic hysteria but concerning his conclusion from the psychoanalysis of ante-pubertal children we confess the skepticism of Loewenfeld, although as Vaschide says 'Dreams and How to Cure Them' is not without its merits." We give the reviewer of this interesting literature our hearty thanks.

NEURASTHENIA SEXUALIS BY BERNARD S. TALMEY, M. D., with nineteen drawings in the text. The Practitioners' Publishing Co., 12 West 123rd St., New York, N. Y. Price \$2.00. The author prefaces his book with a quotation from Ellis that "The central problem in life is sex." A still greater problem is frustration of sex. The psychology of the sexual forms the theme of nearly every kind of poetry—lyric, epic or dramatic, and of every novel. Hence where impotence of sex enters, all poetry of life takes its departure." Stating that also "since the publication of his book 'Woman' he decided to write the present treatise on sexual debility in general." There are, as the author says, "many excellent books on male impotence, but the female side has been somewhat neglected. Yet female impotence has even a greater social significance than the male." The author further says, in which however we do not concur, "If the female is suffering from frigidity, she will, like a Messalina of old, often seek extra marital enjoyment and thus break up her home. Absolute frigidity is of no less danger to matrimony. Indifference to the act to which no pleasure attracts her, the frigid woman passes away from indifference to repulsion, especially after one or several pregnancies."

This depends much upon the nature of the woman and the amiable complaisance of both and their normal fidelity of

nature. The desire of a woman is naturally unto her husband if the husband be rightly fitted for the wife psycho-physiologically. Erotism of the married in degree is often a condition of mutuality.

The author reasons well as to causes of connubial discord and matrimonial discord leading to divorce with certain natures where uxorious frigidity exists, but not in all.

His anatomical, physiological and therapeutic presentation will interest and enlighten the active general practitioner of medicine, enlarging his conception of the importance of a somewhat overlooked subject as compared with the study of impotence in man alone.

THE PSYCHOPATHIC HOSPITAL, 74 Fenwood Road, Boston, was opened June 21st to 23. The institution is officially a department of the Boston State Hospital. Dr. Henry P. Frost, Superintendent. Dr. E. E. Southard, Pathologist to the Massachusetts Board of Insanity and Professor of Neuropathology in the Harvard Medical School, director.

The Chief of the Medical Staff is Dr. Herman M. Adler, formerly of the Department of Theory and Practice of the Harvard Medical School, and more recently, Pathologist to the Danvers State Hospital. The immediate executive arrangements are under the control of Dr. Stephen E. Vosburg, formerly Assistant Physician at the Boston State Hospital.

The hospital contains 100 beds, a Reception Ward, Observation Ward for the investigation of psychiatric problems and social service problems of the out-patient department, will be a feature.

A longer account appears in the Annual Report for the Massachusetts State Board of Insanity, 1911.

THE SURVEY, (social, charitable, civic), 105 E. 22nd Street, New York. Ten cents a copy, \$2.00 per year. One can not look over a single number of this valuable eugenic magazine without being forcefully and pleasingly impressed with the great aid it is giving to the promotion of human welfare in social, charitable and civic uplift work.

This valuable magazine differs from many others of some-

what similar aim in seeking to find out and popularizing what Medicine is doing for the "weal of the world."

It takes note of and promulgates the best eugenic work, for instance of the Academy of Medicine, the Medico Psychological Association, The American Medical Association, The Feeble Minded and Epileptic Study and Care Association and other humane and social welfare organizations. Every well wisher of humanity ought to subscribe for this social life helpful magazine, although it has not yet taken up the rightful concern for the inebriate and the dipsomaniac.

THEODORE SHROEDER'S VALUABLE BOOK ON OBSCENITY BEFORE THE LAW is the most valuable contribution to the present literature on the subject. It calls attention to the significance of the fact of the great need of laws prohibiting the sending of obscene literature through the mails while failing to define precisely what constitutes such obscenity, thus leaving the decision to postmasters and judges and to *honi soit qui mal y pense*. For, while Pope maintains "no pardon, vile obscenity should find," there are proper times and places when, and persons to whom sex knowledge should be as delicately as practicably imparted and certain perils connected with ignorance thereof should be plainly put forth in the interest of personal salutary eugenics and the general welfare of mankind. Every lawyer, physician and philanthropist should read this forceful and instructive book and the clergy might well take notice of it.

THE NERVOUS SYSTEM, an elementary handbook of the anatomy and physiology of the nervous system for the use of students of psychology and neurology by James Dunlop Lickley, M. D. demonstrator of anatomy, University of Durham College of Medicine and lecturer on physiology and hygiene Rutherford College, Newcastle-Upon-Tyne; with 118 illustrations; Longmans, Green, and Co., 39 Paternoster Row, London, New York, Bombay and Calcutta, 1912.

This is a brief but comprehensive treatise on these subjects and one of the best that has come to our review table, for ready reference of student and general practitioner of this year's lit-

erature on the subject. The texts are terse but ample and the plates plentiful and satisfying. For the student it is a *vade mecum* of much value.

SERUM TREATMENT OF HEMORRHAGE AND BLOOD DYSCRASIAS
by A. W. Lescohier, M. D. From the Research Laboratory of Parke & Davis, Company, Detroit, Mich.—Reprinted from *The New York Medical Journal*, February 3, 1912.

It has been reported by numerous investigators that the injection of fresh serum is a potent factor in controlling certain types of hemorrhage where there is a delay in the coagulation of the blood. To the author "this clinical fact" does not appear to have received general recognition, and it has seemed worth his while to attempt a brief review of the scattered references upon this subject with the object of offering a possible incentive to further clinical experimentation and to add somewhat, from his own experience from research from work done in the above great laboratory which has, from time to time, done much for the enlightenment of the medical profession.

REPORT OF THE PATHOLOGICAL DEPARTMENT AND THE DEPARTMENT OF CLINICAL PSYCHIATRY OF THE CENTRAL INDIANA HOSPITAL FOR THE INSANE, Volume IV. This report before us is full of valuable matter for the information of the alienist and neurologist. It reflects great credit on Dr. Edenharter, the Superintendent, and his worthy, industrious and enthusiastic colleagues.

This and similar reports from other institutions subscribing for our magazine give much valuable light on clinical psychiatry and are well worth the pains and time and money spent on them. In fact they are now actually indispensable to the best psychiatric work.

P. BLAKISTON'S SON & CO., PUBLISHERS, 1012 WALNUT ST., PHILADELPHIA, announce June 10, 1912 a new edition of Craig on Psychological Medicine, a Manual of Mental Diseases for Practitioners and Students. By Maurice Craig, M. A., M. D., F. R. C. P., Physician and Lecturer in

Psychological Medicine, Guy's Hospital. Second Edition, Revised. With 27 plates, containing 90 figures, 46 in colors. Octavo. Cloth \$5.00.

This edition has 5 more plates and 15 more figures than the first and the color figures have been increased by 36.

THE THEORY OF SCHIZOPHRENIC NEGATIVISM, by Professor Dr. E. Bleuler, Professor of Psychiatry, University of Zurich; Director of Burghölzli Asylum. Translated by William A. White, M. D., Superintendent of the Government Hospital for the Insane, Washington, D. C. This is the eleventh on the list of those interesting nervous and mental disease monograph series which of course will be sought after and read with avidity by all alienists, psychologists and psychiatrists especially, and by philosophers of the mind and its allied and cooperating, coordinating, influencing and influenced nervous system.

AN ESSAY ON HASHEESH BY VICTOR ROBINSON, Contributing Editor *Medical Review of Reviews*, etc. *Medical Review of Reviews*, 206 Broadway, New York, 1912.

Victor Robinson, the author, presents to us this drug from the historical, chemical, botanical, physiological, psychological, therapeutic and pharmacological viewpoints and from his own personal experience and that of his friends who were willing to taste its fabled exhilaration as DeQuincey did opium.

The result is the entertaining and instructive book before us and the price is only fifty cents, postpaid.

THE AMERICAN PRACTITIONER concludes an article on the "problem of educating our youth," after comparing public and private schools. Thus: "Whatever the reason for this showing, the conclusion seems unavoidable that the college or university which draws its students' patronage chiefly from the public high schools has a striking advantage in the maintenance of scholarly standards. Therein is a phenomenon of present day American education which may well have the thoughtful attention of parents, college faculties and school authorities.

DUTIES OF THE FAMILY PHYSICIAN IN THE PREVENTION AND TREATMENT OF INSANITY, BY Eugene Cohn, M. D., Assistant Superintendent Peoria State Hospital, Peoria, Ill.—This paper advises us that "there are now in public institutions of Illinois approximately fourteen thousand insane, including the epileptic classes, and fifteen thousand feeble minded. Outside of these are many insane in the state confined in private institutions, and hundreds of insane, feeble minded and epileptic are hiding away and being cared for in their homes, not counting the great army of neuropathic individuals, who are bordering on insanity. There are under the State care about two thousand delinquent young men and boys and about nine hundred delinquent girls. In the penitentiaries of the State there are about twenty-five hundred convicts," and pleads for more interest in and more general diffusion of psychiatric and sanitary enlightenment among profession and people.

It asks for the needed advance in Medical Colleges teaching along lines of the scientific and eugenic demands of our day of progress.

PSYCHOLOGICAL MEDICINE.—A Manual on Mental Diseases for Practitioners and Students by Maurice Craig, M. A., M. D., F. R. C. P., Lond. Second Edition.

This manual is one of P. Blakiston's Son and Co's. best among the many good books offered to the profession by these well known publishers of good books.

Space in this issue will not permit even an epitome of this interesting and instructive volume and no detail of the names of its editor and publishers is needed.

The text is entertainingly presented and the illustrations copious, germane and satisfying to the interested reader. The price of five dollars is moderate for the merit of the book.

The chapter on case taking and commitment are valuable and the author's views on morphia, alcohol and other narcotics and as to treatment are in accord with the best clinical experience.

MISSOURI SCHOOL FOR THE DEAF, SIXTY-FIRST YEAR, COMMENCEMENT PROGRAM AND CIRCULAR OF INFORMATION.—

The most interesting feature of this circular to the man who has to be shaved, is the illustrated barber school where under the mandate of Nature the wielder of the razor is of necessity silent for the manipulator can not talk and scrape one's face at the same time. Cheerful and quiet, this institution, however, is doing good work in other ways than in the ministry of silence.

THE NERVOUS SYSTEM, AN ELEMENTAL HANDBOOK OF ITS ANATOMY AND PHYSIOLOGY BY J. D. LICKLEY, M. D. This is a well illustrated, meritorious ready reference edition, well adapted to the needs of the general practitioner and to students for easy and ready reference. Its price is moderate for its merits.

It omits, as too many anatomists and physiologists do, the virile or manucarpal skin reflexes. Longmans Green and Co., 4th Ave. and 30th St., are the well known and worthy publishers.

THE RELATION OF THE PHARMACOPOEIA TO THE PRACTICE OF MEDICINE by Solomon Solis Cohen, M. D., Professor of Clinical Medicine in Jefferson Medical College, Philadelphia; Chairman of the Sub-Committee on Scope, in the Executive Committee of Revision of the United States Pharmacopoeia. This was an address delivered before the 59th annual meeting of the American Pharmaceutical Association at Boston, Mass., August 15th, 1911 and is worthy of special medical consideration.

FIRST ANNUAL REPORT OF THE MOHANSIC STATE HOSPITAL, YORKTOWN, NEW YORK.—We are glad to receive this and all of the many hospital reports and we would be pleased if the *Journal of Insanity* would analyze and epitomize more of them in order that we might abridge and cull, from such epitome, our space being inadequate.

The Alienist and Neurologist however will be happy to reproduce any special features of these excellent reports, so instructive to the public, if sent to us by the hospitals for publication by *The Alienist and Neurologist*.

The Alienist and Neurologist receives most of these reports regularly. Their number precludes special acknowledgment of them. Hence this general thankful acknowledgment.

THE APRIL INTERNATIONAL HOSPITAL RECORD, published in Detroit, Michigan, by the Sutton Publishing Company. A monthly journal, devoted to the promotion of economy and efficiency in hospital planning, construction, equipment and management and allied work, has an interesting and valuable contribution on the Training of Nurses for the Treatment and Care of the Insane.

THE INFLUENCE OF CAFFEIN ON MENTAL AND MOTOR EFFICIENCY, by H. L. Hollingworth, Ph. D., Instructor in Psychology, Barnard College, Columbia University. Archives of Psychology edited by R. S. Woodworth. No. 22, April, 1912. Columbia Contributions to Philosophy and Psychology. New York. The Science Press. This is a volume of valuable experimental information on this important subject.

NOUVEAUX DERIVES SULFURES PERMETTANT D'ADMINISTRER LES ARSENOS SOUS FORME SOLUBLE, PAR VOIE INTRAMUSCULAIRE OU SOUS-CUTANNE cause de la Toxicite du dioxydiaminoarsenobenzol Par le Dr. A. Mouneyrat, Professeur agrege, Doctuer es sciences.—*Extrait du "Journal de Medecine Interne"* et de "*Paris Clinique et Therapeutique*." Paris.

LIFE, MIND AND MATTER, BY LANGDON.—A classically scientific and eminently interesting and instructive contribution.

The author is Professor of Psychiatry, University of Cincinnati College of Medicine and the accomplished superintendent of the Cincinnati Sanitarium.

A COMPARISON OF PERSONAL CHARACTERISTICS IN DEMENTIA PRAECOX AND MANIC-DEPRESSIVE PSYCHOSIS, by Earl D. Bond, M. D., and E. Stanley Abbot, M. D., Assistant Physicians, McLean Hospital, Waverly, Mass.—*American Journal of Insanity*.

ABHANDLUNGEN AUS DEM GESAMTGEBIETE DER KRIMINAL-PSYCHOLOGIE (Heidelberger Abhandlungen. Herausgegeben von K. von. Lithienthal, F. Nissl, S. Schott, C. Wilmanns. Berlin, Verlag von Julius Springer, 1912.

SAUNDER'S BOOKS, MEDICAL, SURGICAL AND ALLIED SUBJECTS, 16th edition, revised to February, 1912, with classified index and illustration of new building. W. B. Saunders Co., 925 Walnut St., Philadelphia.

FURTHER STUDIES ON THE BACILLUS BRONCHICANIS, THE CAUSE OF CANINE DISTEMPER by N. S. Ferry, M. D., Detroit, Mich. Studies from the Research Laboratory Parke, Davis & Co. Reprint No. 17, 1912.

A review of methods of examination in heart and blood-vessel diseases, with special reference to the discovery of therapeutic indications, by Louis Bishop Faugeres, A. M., M. D., New York.

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AN OPERATION FOR SEVERE GRADES OF CONTRACTED OR CLAWED TOES by Phil. Hoffmann, M. D., St. Louis, Mo.—From *The American Journal of Orthopedic Surgery*, February, 1912.

UNIVERSITY OF PITTSBURG. The School of Education has inaugurated new courses in Clinical Psychology and defective and retarded children. By Dr. J. E. Wallace Wallin.

THE RELATION OF PRACTICES TO INDIVIDUAL DIFFERENCES
by Frederick Lyman Wells, Ph. D., McLean Hospital,
Waverly, Mass.—From the *American Journal of Psychology*.

ARSENIC et SYPHILIS par le Dr. A. Mouneyrat, Professeur agrégé
a la Faculte de Medecine de Lyon Docteur es sciences.
Extrait du *Journal de Medecine Interne*, Paris.

UEBER DIE SEXUELLE KONSTITUTION UND ANDERE SEXUAL-
PROBLEME by L. Loewenfeld. Review by F. L. Wells.—
From *American Journal of Insanity*.

LITHOPEDION, by William Seaman Bainbridge, Sc. D., M. D.,
New York. The *American Journal of Obstetrics and
Diseases of Women and Children*.

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STATE CONTROL OF STATE HOSPITAL LIBRARIES, by Edith
Kathleen Jones, Librarian at McLean Hospital, Waverly,
Massachusetts.

THE EVOLUTION OF THE OPERATING TABLE by William Seaman
Bainbridge, M. D., New York.

FATIGUE by Dr. F. L. Wells.—From the *Psychological Bulletin*,
November, 1911.

THE TRAINING SCHOOL, Vineland N. J., May, 1912.

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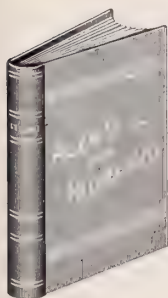
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References—Dr. Henry M. Hurd, Dr. Wm. Osler, Johns Hopkins Hospital, Baltimore, Md. Dr. Thomas A. Ashby, Dr. Francis T. Miles and Dr. Geo. Preston, Baltimore, Md. Dr. George H. Rohe, Sykesville, Md. Dr. Charles H. Hughes, St. Louis.

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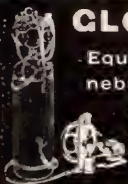
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THE ALIENIST AND NEUROLOGIST

VOL. XXXIII. ST. LOUIS, NOVEMBER, 1912. No. 4.

KLEPTOMANIA AND PYROMANIA.*

By JAS. G. KIERNAN, M. D.,

CHICAGO.

Fellow Chicago Academy of Medicine, Foreign Associate Member French Medico-Psychological Association; Honorary Member Chicago Neurologic Society, Honorary President Section of Nervous and Mental Diseases Pan-American Congress 1893, Chairman Section on Nervous and Mental Diseases American Medical Association 1894; Professor Neurology Chicago Post-Graduate School 1903; Professor of Nervous and Mental Diseases Milwaukee Medical College 1894-5; Professor of Nervous and Mental Diseases Illinois Medical College 1905; Professor of Forensic Psychiatry Kent-Chicago College of Law.

ALTHOUGH he does not put it clearly, Stekel seems to imply that kleptomania is a sub-conscious symbolism of an ungratified suppressed desire. It would therefore differ, as Havlock Ellis points out, from the type described by W. L. Howard, where a girl stole men's garters to secure an orgasm. This type is outlined by Clerambault where the theft is the conscious symbol of gratified desire. Both these elements seem behind Stekel's cases, since the analysis is lacking as to the early phenomena. The assertion as to the presence of homosexuality in all kleptomania is demonstrably untrue.

In a forensic case¹ in which I was called 23 years ago even ordinary sexual elements were lacking, as well as the impulse, for

* Continued from the May, 1912, Alienist and Neurologist.

1 People vs. Otto Funk.

the thefts were an outcome of delusional right. The case was as follows:²

O. F. was the son of neurotic Bohemians. He was a bright boy and early attracted the attention of benevolent Americans, through whom he secured a collegiate education. During his attendance on college he worked hard to support himself, but had erotic delusions which he concealed. The institution admitted both sexes. During his residence at the college he gradually evolved the delusion that he was a descendant of the old Norman family of the Talbots and heir to their estates. This opinion was only exceptionally expressed by him and attracted but little attention from his friends. His mental powers were markedly unequal. He had, at times, well-marked hallucinations of hearing. He kept a picture of a nun in his room, to which he attached peculiar significance as that of his "life affinity." He obtained a high position in his class. After graduation he obtained various places which he lost through his querulency. He was placed in a position of trust in the Chicago Public Library and stole several hundred volumes, chiefly metaphysical works in which he was interested at the time. He did not sell these. He seems to have identified his "life affinity" with an actual personage, for he persecuted a young lady fellow-student with his addresses, which she rejected. Soon after his library scrape, the people in the vicinity of the Chicago University were startled by the arrest of two men engaged in digging a trench. It was discovered that O. F. had hired these men to dig the trench, which he intended for the purpose of seizing his "life affinity" by means of a trap door. He then intended to brand her forehead with the legend "Variety is the spice of life," and then to let her go. The legend would be an eternal evidence of her capricious, cruel character. He was tried for the theft of the books, but acquitted as insane as the explanation of the thefts was a pure delusion connected by an irregularly associated process of reasoning with the claim to the Talbot estates. He was, like most of the insane metaphysicians, a devotee of that egotism which is now called pragmatism, uniting the occultism and materialism of primitive man. He was sent to Elgin State Hospital, escaped, entered

2 Alienist and Neurologist, 1889.

Harvard Theological School under an assumed name; was detected stealing books, and committed suicide. He was a rabid plutocratic devotee who insisted that the dogs of the working classes should be put down by dynamite. These reactionary views secured the sympathy of plutocrats. Of all the thefts the property claim was the sole mechanism.

An erotic element appears behind that neuropathic desire for a new sensation which underlies the seeming philoneisms of the unstable. This finds vent in primitive charlatanism and occultisms and notoriety attempts of criminal or non-criminal character resulting from hysteric instability dreams. These as C. C. Hersman, C. H. Hughes, C. B. Burr and myself³ have shown, pass into the waking state as firmly fixed beliefs. Here the wish-content of the dream (erotic gloating of often a mixed Narcissian Sadistic and Masochistic type) is clearly determined.

While relief from satisfaction of an imperative impulse often reaches the height of emotional exaltation from satisfaction of sexual desire, hunger or desire of elimination, still satisfaction is secondary to the imperative impulse—not its origin. Superficially alike as the types of satisfaction seem, the difference between them is one of kind, not degree. Insistence on the alternative hypothesis required by scientific rules of evidence brings this difference into bold relief.

The Stekel view that theft is merely an expression of eroticism whose nature is felt and can be completely controlled, removes such theft from the domain of irresponsibility. The only legal test justifiable equally from the viewpoint of psychiatry and the standpoint of abstract justice is that laid down by the Illinois Supreme Court, in *Hopps vs. the People*.

Since stealing, as W. W. Godding⁴ points out, is not always kleptomania which is an irresistible impulse to steal, the question is a matter of fact for a jury. According to the Illinois Supreme Court⁵ a safe and reasonable test in all such cases would be that whenever it should appear from the evidence that at the time of doing the act charged, the prisoner was not of sound mind, but affected with insanity, and such affection

³ *Alienist and Neurologist*, July, 1897.

⁴ *Two Hard Cases*.

⁵ *Hopps vs. People*, 31 Ill. Supreme Court, Rep.

was the efficient cause of the act, and that he would not have done the act but for that affection, he ought to be acquitted. But this unsoundness of mind or affection of insanity must be of such a degree as to create an uncontrollable impulse to do the act charged, by overriding the reason and judgment, and obliterating the sense of right and wrong as to the particular act done, and depriving the accused of the power of choosing between them. If it be shown the act was the consequence of an insane delusion and caused by it, and by nothing else, justice and humanity alike demand an acquittal. The Illinois statute was designed to ameliorate the rigor of the old rule of the common law, in declaring that a person "affected with insanity" shall not be considered a fit subject of punishment for an act done which, under other circumstances or disposition of mind, would be criminal.

About two decades ago, discussing responsibility in sexual perversion before the Chicago Medical Society,⁶ I pointed out that, although expressions of eroticism, thefts may be outside the sexual sphere domination, though they resemble the desire for coitus which leads to rape. Desire for coitus, even when excessive, does not constitute evidence by itself of an imperative impulse. A year previously before the Chicago Academy of Medicine,⁷ I had likewise shown this erotic association of theft.

Thirty years ago Zambaco,⁸ discussing sexual precocity, reported the case of a 7-year old girl, who indulged in coitus, masturbation and various perversities. She seduced into masturbation her 4-year old sister. She stole whenever she could. The thefts were accidental associations of the sexual sphere from arrested development of the secondary ego. Into many such associations the Freudists read sexual symbolism, which is often the product of psychoanalytic suggestion.

Forensically the question is often of the greatest importance.

The Texas⁹ courts have specifically recognized kleptomania as a defense for stealing. Looney was indicted for theft

6 Chicago Medical Recorder, 1892.

7 Alienist and Neurologist, 1891.

8 L'Eueptale, 1882.

9 Looney vs State, 10, Tex. App., 520.

of clothes, wearing apparel and other articles from a store. On being apprehended he had confessed his guilt, claiming an ungovernable habit of appropriating articles of property belonging to others, many of them articles for which he could have no possible use, such as photographs of entire strangers, combs, brushes, books, etc. He could not tell how, when or where he came in possession of them. Several witnesses testified that he was not of strong mind, and was, in their opinion, incapable of distinguishing between right and wrong. The court instructed the jury (1) that the prisoner could not be convicted if he was unable to distinguish between right and wrong; (2) that if the prisoner did "take the goods of W. T. Nobles, at the time and in the manner charged, but at the time of committing the act was laboring under such a defect of reason as not to know the nature and quality of the act he was doing, or if he did know it, that he did not know that he was doing wrong, then you will acquit."

The jury found the prisoner guilty, giving him two years in the penitentiary.

This appeal, Judge Winkler said, is from conviction of theft of property over twenty dollars in value. From the evidence and the charges of the court, given and refused, we are led to conclude that the only defense relied on in the court below was kleptomania, and if there was error in the charge of the court, and prejudicial to the rights of the defendant, under this defense and the testimony on that subject, such error is to be found in applying the facts to the general subject of insanity rather than in applying it directly and specifically to the peculiar condition of the defendant's mind, developed by the proofs; and in this respect we incline to the opinion that the charge, taken as a whole, was defective, in not giving to the jury a special charge on the subject of this peculiar symptom as it relates to the general subject of insanity.

It is said that kleptomania occurs not unfrequently as a symptom in mania and the mental confusion incidental to it, and in depression and delirium, in which its consideration involves less difficulty. But where it occurs in cases of concealed insanity, its discovery is not easy. To our minds, what has been said by Ellinger, in the nature of practical directions,

may well be considered in connection with the case and the subject under consideration, not as law, but as illustrating the propriety, if not the necessity, of a charge to the jury on this peculiar feature of the case, as follows: (1) In the earlier developments of mania,¹⁰ kleptomania is an important symptom; it will, however, be found accompanied more or less by other symptoms of incipient derangement, such as a general alteration in the accustomed mode of feeling, thinking, occupation and life of the individual, a disposition to scold, dispute, and quarrel, to drink, and to wander about busily, doing nothing, and the bodily signs of excitement (restlessness, want of sleep, rapid pulse, etc.) (2.) Kleptomania continues after the disease, to all external appearances, has ceased. Here the disease also has not terminated which can only be indicated by a return of the original state of thought and feelings. (This calls for a continued course of observation by the examining physician.) (3.) There are distinct but occult hallucinations at work. These are to be assumed, the more readily, the more bizarre and exclusive is the desire to steal, and the more the objects to which it is confined are out of proportion to the property of the thief; and particular attention should be paid to the existence, present and past, of other symptoms of insanity." An instance of this inordinate propensity to steal is cited in this connection from Dr. Rush, who says, "In one instance a woman was exemplary in her obedience to every command of the moral law, except one—she could not refrain from stealing." We make these further quotations from this authority as indicative of this peculiar symptom of insanity. "It would be difficult to prove directly that this propensity, continuing as it does through a whole life, and in a state of apparently perfect health, is notwithstanding, a consequence of diseased or abnormal action in the brain, but the presumptive evidence in favor of this explanation is certainly strong. First, it is very often observed in abnormal conformation of the head, and accompanied by an imbecile condition of the understanding. An instructive case has been lately recorded, in which this propensity seems to be the result of a rickety and scrofulous constitution."

10 Mania here synonym for insanity.

We mention these peculiarities in order to show the fact that kleptomania is a recognized symptom of mania,¹¹ in some of its recognized forms at least, and to illustrate the importance—this being the peculiar defence, of embracing in a general charge on the subject of insanity, this peculiar symptom—a feature of the present case to which proper attention seems not to have been paid, on the trial below, and which in our opinion would have been more fully developed if the attention of the jury had been called more pointedly to this feature of the defence. Because of what we deem a material defect in the charge, as above indicated, the judgment will be reversed, and the cause remanded for a new trial.”

In the New York case are evidences of shoe fectichism.¹² It was here laid down: (1.) It is a defense to an indictment for crime, that the act complained of was done under an insane impulse, which at the time, destroyed the capacity to distinguish between right and wrong. (2.) On the trial of an indictment for robbing a female of her shoe, in daylight, in the public street of a city, it being proved that the accused had been, for several years, ever since an injury to his head, in the habit of taking the shoes of females, wherever he could find them, and secreting them without any apparent object for so doing, and that insanity was a hereditary disease in the family of the prisoner, on the side of his mother, with other circumstances tending to establish monomania, he was acquitted on the ground of insanity.

The prisoner was indicted for robbery, alleged to have been committed upon August 18th, 1849, and was tried October 10th following. Sarah Watson testified that about 8 o'clock in the morning August 18th, she was walking along Pearl Street, Brooklyn, and hearing some person behind her, looked around and saw the prisoner, who immediately seized her, threw her down, and took a shoe from one of her feet, and ran away. She testified that the time she had a gold chain upon her person, but that it could not be seen by the prisoner. There was a man near by who was unknown to her, but who hallooed at the prisoner and gave chase to him, but that the prisoner out-ran him and escaped. It was admitted by the defense, that the

11 Mania here is a synonym for insanity.

12 *People vs. Charles Sprague*, Wharton's Criminal Defenses, Insanity. P. 779

shoe of Miss Watson was found in the prisoner's overcoat pocket, about 10 o'clock on the same day, at the printing office of the Long Island Star. The prisoner was a printer, then employed in the office of the Star; that he came to the office upon that morning at his usual time, hung up his overcoat and went to his work as he had done before. A proprietor of the Star, hearing of the outrage upon Miss Watson, and her description of the perpetrator, suspected the prisoner. He demanded the shoe he had taken from the foot of the young lady. The prisoner replied, "It is in my overcoat pocket." The shoe was taken from the prisoner's overcoat and identified by Miss Watson as the one taken from her. The prisoner made no attempt at concealment or explanation. The counsel for the defense admitted that if the prisoner was sane, he was guilty of the crime for which he was on trial. The father of the prisoner, a highly respectable Congregational minister, testified that the prisoner was twenty-five years old; that he had generally resided in the family of the witness, but had spent a year with a brother at Hartford, Connecticut, where he went about four years before. Since his return from Hartford, the prisoner had lived with the witness. The prisoner was married in 1847, and was with his wife, living at his father's at the time of the assault upon Miss Watson. The prisoner had at different times received wounds and bruises upon the head. When quite young he was struck with a hoe near the crown of the head, producing an open wound, which after some time closed and healed up. When about twelve years old, the prisoner fell from a cherry tree, striking upon his head. At Hartford in 1837 the prisoner fell from a second-story balcony, and was brought home insensible. No immediate effect seemed to be produced upon the prisoner's mind by this accident, but soon after his conduct became strange. The father's mother had been insane for eight years, and some of the time in an insane hospital. Her brother became insane and hung himself. Two of her sisters were occasionally insane. Her mother was also insane. He and his wife had always known the mind of the prisoner to be not so strong as the minds of their other children. After the fall from the balcony the prisoner was more carefully watched and kept in. Some painful indications were developed in the

prisoner, as at times a remarkable prominence of the eye, and a dullness which appeared to increase. A physician was consulted. An effort was made to educate the prisoner for college, but it was found that it could not be done. About this time a shoe of some female member of the family would be missing, which when found would frequently be wet and crumpled up; that a girl named Almira Godfrey, living in the family at the time, was at first suspected. At length one of her shoes was missing, and when found was wet and crumpled up like the others. The family then suspecting Charley (the prisoner) soon found it was he who took away the shoes. When a shoe was missing, it would be found sometimes under his pillow, sometimes between the straw and feather bed, sometimes in his trunk, and sometimes in his pocket, generally with his clothes wound round the shoe, as if to conceal it. The prisoner before his fall from the balcony had been truthful, and of a frank open demeanor, and willing to acknowledge the truth, though to his own disadvantage. After it was found he took the shoes, whenever one was missed, and the father spoke about it, he would hang his head and say he did not know, but the shoe would be found somewhere secreted. On some occasions when a shoe had been missed and found under his pillow, his mother would say, "Charley, another shoe gone," to which he would reply, "I'm sure I didn't do it." His mother would say, "I found it under your pillow," then he would admit it. He seemed not to have a memory of the fact. The father punished him for taking shoes, but soon thought he could recognize the features of insanity in his conduct. Pains were taken to keep shoes out of his way. They were put into drawers, but he would take them out of the drawers in the night. At times the prisoner had fullness of eyes; a vacancy of the eye was frequently apparent. The family kept him in evenings and away from exciting amusements. About the time of the affair for which prisoner was on trial, he had complained a good deal of headaches. His practice of taking and secreting shoes has been continued down to the present time, but intermittently. The father went to board with him last May. His wife would miss her shoes occasionally, and they would be found where the prisoner had secreted them. On cross examination, the father said

that he saw the wound from the hoe; that he did not see the wound caused by the prisoner's fall from the cherry tree, which took place in Vermont. That he saw the wound occasioned by the fall from the balcony; that all apprehensions passed away in a day or two after the fall from the balcony, but soon after came the protruding and glassiness of the eye; that he was then between twelve and fourteen years old, and went to school; that his moral sense seemed to be somewhat blunted; that he was not as truthful as before.

(There are here some suggestions of exophthalmic goitre from the traumatism.)

Depositions of Thomas Sprague, of Michigan (a brother of the prisoner), of Mary E., his wife, of Julia A. Hyde, a sister of prisoner's father, of Oliver Hyde, her husband; of Rebecca Freeman and Maria King were read. The deposition of Thomas Sprague and wife dealt with the habit of the prisoner while living with them, to take shoes of ladies and secrete them. Some of the depositions spoke of the fact of the fall from the cherry tree in Vermont, and some of them proved the insanity of the relatives of the prisoner, in corroboration of the father's testimony.

C. H. Nichols was of the opinion that the prisoner was under derangement of mind. The act charged appeared to him to be an insane act. It was not uncommon for monomaniacs to secrete, and to endeavor to escape. Cases of strict monomania were very rare, but existed. In such cases all conduct not affected by the peculiar delusion, may be perfectly rational. The cases of insane impulse are more frequent than those of monomania. Acts done under insane impulses are more likely to be remembered than those done under the influence of monomania. Theodore L. Mason testified that insanity is the genus, monomania a species, and that the impulsive characteristic may be common to both general and partial insanity. He was partially insane, and that the act for which he was on trial was done from insane impulse.

The presiding Judge charged the Jury, that there was no question made, that the prisoner had done the act alleged in the indictment. The only question for them to decide was whether the prisoner at the time of the act done, was a responsi-

ble moral agent. That if at the time he did the act the prisoner was of sound mind, and capable of judging between right and wrong, then he was guilty of the crime charged upon him, but if he was of unsound mind, and acting under an impulse which, at the time, overthrew or obscured his knowledge or capacity to judge of right and wrong, then he was not capable of committing a crime, and must be pronounced not guilty. That it seemed quite unnecessary to go into any consideration of the question of general insanity, as the whole defense had been put upon the ground, that the prisoner was partially insane, and that the peculiarity of his insanity consisted in what appears to the sane mind an objectless desire to possess himself of shoes of females, and to hide and spoil them. That insanity as a defense, was an affirmative matter, and in order to be allowed, must be proved beyond all reasonable doubt. If they were satisfied beyond reasonable doubt that the prisoner did the act charged in the indictment under an insane impulse, being at the time incapable of knowing right from wrong, it would be their duty to return a verdict of not guilty; but if they were not satisfied of the prisoner's insanity, it would be their duty to give a verdict of guilty. After a short absence the jury returned with a verdict of not guilty.

The Sprague case is obviously impure. There are suggestions of epilepsy and exophthalmic goitre and more than suggestions of shoe sexual symbolism (the wet and crumpled shoes.) More careful analysis would probably have shown all these factors, sometimes singly, sometimes coincidentally acting. Partial identification of "monomania" with epileptic unconsciousness appears in the evidence of Dr. Nichols.

According to Pitres and Regis kleptomania is manifest in two phases. In one there is more or less unconscious theft of a stupid amnesic variety by imbeciles, feeble minded instabilities, senile and paretic dementes, as well as secondary confusional lunatics and terminal dementes. The phase is one of conscious impulse to theft. Dupony¹³ disputes the claim that these include all phases of kleptomania, but like many non-alienistically trained psychologists, confuses theft and kleptomania. He claims that desire being an emotion, all causes capable of increasing

13 Jour. de Psych. Normal et Path. Sept.-Oct., 1905.

the emotivity will increase the appetitive power of the individual and quicken particular desire. In this casual category come repeated moral shocks, intense psychic traumata, profound chagrin, violent nervous agitations. The variety of emotion which results from sexual irritation seems to be particularly active in the genesis of morbid emotivity. This irritation, by augmenting the emotivity of the subject and impelling him toward morbid desires, leads to obsessions. For this reason certain collectors and fetichists become kleptomaniacs. They keep sharpening their desires regardless of what these desires stand for—artistic bibelots, postage stamps, women's apparel (erotomantic fetichists)—they waste their entire sensibility in the contemplation and in the incessant physical or mental handling of their collections. The enjoyment they derive from it becomes more and more voluptuous and in turn fans the flame of the desire they have to renew it. This is the vicious cycle in which these unfortunates turn, the desire to enjoy increasing their pleasure ten-fold, the latter causing the former to light up again. The impulsion, logical and fatal result of desire awakened in the presence of the subject wished for and not possessed, ends by becoming sufficiently powerful to triumph over the resistance put forward by the will, and the collector becomes a thief. Going a step farther, the emotion carried to its maximum becomes an agonizing, irresistible impulse; the desire has created an obsession, the collector is replaced by the kleptomaniac.

The fetichistic sexual pervert who gets, for example, his voluptuous satisfaction from the rubbing of a special stuff, generally silk, follows the same morbid course as the collector.

Analytically considered, desire might be the result of all emotion but is not an emotion in itself. The question involved is a far deeper one than either Dupony or Stekel, who follows Dupony without acknowledgment, seems to consider. In the sane, as in the insane, collectionism at times mimics kleptomania and both are products of desire. Mingazzini¹⁴ under collectionism includes gathering objects. He divides it into polycollectionism (gathering of many objects), monocollectionism (gathering one object) and mono and polykleptocollec-

14 *Revista Sperimentale*, X 4.

tionism (in both of which an element of theft enters.) While monocollectionism or monokleptocollectionism is found in most psychoses and is the expression of profound psychic insufficiency or dissolution, it, in congenital defectives, does not have the prognostic or diagnostic significance it has in dementing psychoses. Where it omens at the onset of dementia in acute psychoses it may be an expression of psychomotor restlessness. Bodard¹⁵ ascribes polycollectionism in a katatoniac to stereotypy. Some of the articles "collected" suggested both polykleptocollectionism and fetichism. Toilet articles certainly suggest sexual symbolism. A female patient of mine, in whom the existence of delusions at one time was very apparent, became quiet and an assistant to the attendants. Owing to overcrowding a room occupied by her alone, had to be used for two, whereupon a decidedly multifarious collection was found. There were 30 napkins, some stained with blood; 20 drawers; 30 chemises; 30 pocket handkerchiefs; 30 combs; 410 bangs wrapped separately, each package bearing cabalistic marks; 65 hair pins also wrapped separately; 10 pairs of shoes crumpled up and evidently used for masturbation. There was evident polykleptocollectionism and homosexual symbolism. The patient was originally heterosexual but seems to have become homosexual in the insane hospital. She was detected in cunnilinctus and tribadism. There were at the onset of the case systematized persecutory delusions which passed into megalomaniacal. Later, at the climacteric, these became dimmed and homosexual ideas appeared.

Any alienist who has kept track of the secondary confusional insane, the paretic, senile and terminal dementes, knows their tendency to collect rubbish. Often in the climacteric confusional insane, in the senile, paretic and terminal dementes there is a monocollectionism visible beyond the seeming polycollectionism; brightness is the quality sought. Here the patient is often really obsessed by a bright object while much more valuable things easier taken are ignored. In monokleptocollectionism and polykleptocollectionism erotic elements often appear. In the first the stealing gives erotic satisfaction while in the second is material for future sexual symbolism which

15 Rev. de Psychiatrie, March, 1911.

may form a connecting link with *pymalionism* (a love of statues or paintings.) Both types, however, may have merely the element of future gloating and not the erotic impulse finding complete satisfaction in the theft.

Krafft-Ebing remarks that cases in which within a fully developed circle of masochistic ideas the foot and shoe or boot of a woman, conceived as a source of humiliation, have become objects of special sexual interest, are numerous and through many degrees, easily discriminated, they form a demonstrable transition to cases where masochism retires to the background and passes beyond the threshold of consciousness while the shoe, seemingly inexplicably, alone remains in consciousness. These cases which have a forensic interest (theft) occupy a position midway between passive and active *algolagny*, masochism and sadism. W. A. Hammond¹⁶ has reported a case, which bears out this position of Krafft-Ebing, in a man of highly neuropathic heredity. At seven a servant girl taught him masturbation and endeavored to have frequent coitus with him. Once she rubbed his penis with her foot. This was the only time her procedures gave him any pleasure. His sexual imagery when masturbating was thenceforth concentrated on women's shoes. School girls' shoes were without effect. He tried more than once to seize the school teacher's shoe. He was in consequence put under a male teacher. He took up surreptitiously women's shoes to masturbate with, returning them. Pictures of naked women or of their genital organs or obscene pictures gave him only disgust. He never thought of coitus. He began shopkeeping and derived great pleasure from fitting shoes on women. Transition from the psychological manifestation of this case to development of shoe stealing in a case of Krafft-Ebing is simple and¹⁷ direct. At ten the patient was attracted by a beautiful foot. At 12 he became attracted by the beautiful foot of a woman. At 14 he masturbated with foot sexual imagery. The foot of his 3-year old sister attracted him. Feet of other women excited him, but the idea of coitus was disgusting. Often he was impelled to touch his genitals with his sister's shoe but he always resisted this impulse. Impure as it is, the case of Sprague

¹⁶ Sexual Impotence.

¹⁷ Psychopathia Sexualis.

illustrates a transition to shoe stealing evidently of this origin. In a female case on one occasion, after mutual cunnilinctus, at 14 just ere the appearance of the menses, one girl rubbed another in the vagina with her shoe, creating an intense erethism. Thereafter in the girl's sexual imagery a shod foot always dominated. Under the psychological law thus outlined the thing symbolized in all phases of human thought often becomes lost in the symbol. This tendency, as DeMaulde¹⁸ has shown, was emphatically present in the female platonists of the renaissance epoch. A quality which these idealists regarded as conducive to charm was a certain stiffness and reserve of manner. Woman, like the Ark of the Covenant, was to be worthy of all respect. She was not thought the worse, if like a mimosa, she shrank within herself when the sun's rays were no longer there to warm and if she was afraid of the dark. The woman chary of her smile was considered a beautiful creature. In platonist circles they could scarcely even admire the beauty of the shoulders, indeed there were no longer seen flaunted in street or church under the eyes of the common herd. Certain liberties in costume were from time immemorial despair of preachers—low cut dresses like that of Isabel of Bavaria, whom Jacques Legrant admonished from the pulpit for showing everything “down to her navel;” robes scalloped at the sides; long pointed shoes so much in the way that a woman had to lift her petticoats very high to be able to walk. Here however was noticeable the influence of an esoteric mental state allied to foot fetichism. The most frequent type of erotic symbolism, remarks Havelock Ellis,¹⁹ is that which idealizes the foot and the shoe. This phenomenon is frequently complex. Theologically the lubricious conception of the shoe early appears prominently in church sumptuary laws. At the Rheims synod of 972 Abbot Raoul of St. Remi²⁰ denounced monks for wearing indecent shoes of large size and tissue so transparent that nothing was hidden. From this time on these “chicken shoes,” with a claw or beak, although pursued by anathemas of popes and invectives of preachers, continued in use for more than four centuries. They were considered by

18 *Women of the Renaissance.*

19 *Medicine*, February, 1906.

20 *Histoire de la Prostitution*, Tome 1.

middle age casuists as the most abominable evidences of lubricity. It is not evident at first sight, remarks Dufour, what there could be scandalously suggestive in shoes terminating in a lion's claw, an eagle's beak or a ship's prow. The excommunication of this species of shoe preceded the pornographic inventions of libertines who wore shoes with phallic terminations. These were often worn by modest women who didn't recognize what fashion placed on the tips of their shoes. Royal and ecclesiastic sumptuary laws alike forbade these shoes. Great lords and ladies, probably wearing modest "chicken shoes," defied these laws. Charles V and the Avignon pope, Urban V, forbade these shoes, but they still persisted in use in the reign of Louis XI. The phallic terminations, fashion had meanwhile turned into spirals like those of Chinese and Turkish shoes.

Even for the normal lover, the foot is a most attractive part of the body. Stanley Hall²¹ found that among the parts specified as most admired in the other sex by young men and women who answered a questionnaire, the feet came fourth (after the eyes, hair, stature and size). Casanova, an acute student and lover of women but not a foot fetichist, remarks that all men who share his interest in women, are attracted by their feet. These offer the same interest as the particular edition does to the bibliophile.

The hand does not appear among the parts of the body normally of supreme interest. An interest in the hand is by no means uncommon.²² The hand does not have the mystery which envelopes the foot and head fetichism of which Binet²³ and Krafft-Ebing²⁴ report instances is rather rare.

The normal lover in most civilized countries does not usually attach such importance to the foot as he frequently does to the eyes, although the feet play a very conspicuous part in the work of many novelists. Hardy²⁵ shows an unusual but by no means predominant interest in the feet and shoes of his heroines. See the observations of his cobbler. Wilkie Collins²⁶

21 *Adolescence*, Vol. 2, p. 113.

22 *Memoires*, Vol. 1, Chap. XII.

23 *Etudes de Psych. Exper.*

24 *Psychopathia Sexualis*.

25 *Under the Greenwood Tree*.

26 *The Moonstone*.

makes his shrewd steward, Betteredge, agree with Cobbett in choosing a wife from the way she sets her foot down. Goethe²⁷ narrates an episode involving the charm of the foot and the kissing of the beloved's shoe. To a not inconsiderable minority the foot or boot becomes the most attractive part of a woman. In some noted cases the woman seems comparatively an appendage to her feet or shoes. Shoes under civilized conditions much more frequently constitute the sexual symbol than do the feet, which is not surprising since in every day life the feet are not often seen. Only under exceptionally favorable circumstances does foot fetichism occur.

Castiglione goes into raptures about the simple velvet boot of a lady, who on going to mass one morning, fancied she had to spring lightly across a brook.

There was an element of head fetichism in Gilles de Retz.²⁸ He collected the heads of children slaughtered by him.

27 *Elective Affinities.*

28 *Alienist and Neurologist*, April 1891.

(To be continued.)

WHERE FANCIES FLY WITH PAINTED WINGS TO
DAZZLE AND MISLEAD.

By

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"Insanity is a vast unexplored continent."

"In the brain, that wondrous world with one inhabitant, there are recesses dim and dark; treacherous sands and dangerous shores, where seeming sirens tempt and fade; streams that rise in unknown lands from hidden springs; strange seas with ebb and flow of tides, restless billows urged by storms of flame; profound and awful depths hidden by mist of dreams, obscure and phantom realms where vague and fearful things are half revealed; jungles where passions' tigers crouch; and skies of cloud and blue where fancies fly with painted wings to dazzle and mislead: and the lone wanderer in this pictured world, enwrapped by the emotions of an exuberant soul, wends his way across green fields and blooming meadows, beside cooling springs, sparkling cascades and shady groves; or he is led by old desires and ancient hates, and stained by crimes of many vanished years, and pushed by hands that long ago were dust, until he becomes a bewildered slave that mockery has throned and crowned."—*Livingston S. Hinckley.*

The term insanity, so often misconceived, seems to present to the mind of the general public an idea diametrically opposed to that of the alienist.

The picture most commonly accepted of dishevelled hair, untidy appearance, bizarre dress, wild, incoherent speech and

vain babblings, or the drooling mouth, senile smile, and tottering, halting step of the prematurely aged is really an exception, rather than that most usually encountered in insane hospitals.

While admitting that a murderer, obsessed by his original criminal instincts in exaggerated form, must be insane; yet the public has been slow in realizing that Ravallac, Bresci, Caserio, Luccheni, Wilkes Booth, Guiteau and Czolgosz were really insane men, and therefore wholly irresponsible; their so-called crimes having been committed under the influence of morbid delusions. That these have their prototypes far along the ages, surely none may doubt; or that others than Nero have worn the royal purple. Note Caligula carousing with his jewel-decked horse and naked jockeys; Elagabalus, with gaily painted face, working in woman's garb with the vain delusion of bringing the Lady Moon from Carthage to wed the Sun Giant.

Oscar Wilde, himself esteemed an abnormal, has in his morbid musings gathered a weird host from out the centuries from which we cull a few. Filippo, Duke of Milan, who slew his wife and painted her lips with scarlet poison; Pietro Barbi, the Venetian, commonly known as Paul the Second, whose tiara, valued at two hundred thousands florins, was bought at the price of a terrible, unmentionable sin; the Borgia on his snow-white horse, with Fratricide as his close companion, riding beside him; and Charles the Sixth, who in his madness wildly adored his brother's wife, and could only be quieted with Saracen cards, painted to represent Love, Death and Madness.

Hippocrates and Plato each describe the insane, and we learn that both Greeks and Romans treated them in chambers adjacent to their temples. The Egyptians likewise in their temples cared for their insane, attempting with music and dancing, amelioration thru diversion.

In Europe, as late as the middle of the eighteenth century, these unfortunates, if harmless, were permitted to wander at will as beggars and vagabonds, eliciting mockery and occasionally pity. Becoming violent and regarded as possessed of devils, they were ministered to by monks, and in the effort to exorcise evil spirits, were lashed and scourged and not infrequently chained or placed in iron-bound cells.

St. Vincent de Paul, "The Father of the Poor," who es-

poused the cause of the lunatic, was followed by Tenon; and later still, Cousin, Thouret, Cabanis, Chiarugi and Pinel, did much to revolutionize the treatment of the insane. Of these Pinel was by far the greatest, and following him, came Esquirol, Georget, Jacobi, Falret, Zeller, Foville, Voisin, Scipio, Parchappe and the Tukes of York Retreat; and in the last century Brigham, Rush, Kirkbride and Channing stand out prominently.

The initiative so ably made by France in latter part of the eighteenth century has been successfully carried forward, until no government failing to provide for these, its most unfortunate citizens can be accounted as having fulfilled all the requirements of the highest civilization.

In regard to the question as to who is insane, as far back as 1832, Harlam said: "I presume the Deity is of sound mind, and He alone." To this Montesquieu assents in saying that asylums for the insane were built in order that the world at large might consider itself sane; while Boileau considered all men insane, the only difference between them being the various degrees of skill with which they were able to conceal the rift.

It is not possible to divide sanity from insanity by a single criterion; for many people of exceptional mental power have in diverse lines shown themselves enslaved by abnormal ideas. Witness Napoleon's faith in his star; the hallucinations of Joan of Arc; Martin Luther's interview with the Devil; and even the late Bishop Coleman, of Delaware, fond of relating the story of a man's conversations with his satanic majesty, had an unshaken belief in a personal devil.

H. C. Wood said many years ago: "The close relations between sanity and insanity are illustrated by the fact that the insane mind may be capable of performing useful mental labor, and may even originate much that is of value to humanity. The records of genius and of great works achieved show how perilously near intellectual power may lie to intellectual infirmity." Dean Swift—with the delusion that certain parts of his body were made of glass—Rousseau, Chatterton, Dr. John Brown (of "Rab & His Friends" fame,) Shelley, Charles and Mary Lamb, Bunyan and Beethoven had each and all peculiarities setting them apart from normal. Of epileptics, Mahomet,

Napoleon, Moliere, Handel, Paganini, Mozart, Schiller, Richelieu, Newton and Flaubert are notable examples, all showing abnormal complications the close associate of the highest intellect, while many—Campbell, Dr. Johnson, Buffon and others were affected with nervous instability. A glance at the long list of those afflicted with opium or drink habits shows Sheridan, Coleridge, DeQuincey, Madam de Stael, Burns, Addison, DeMusset, Morland, Turner, Handel, Gluck and Poe.

The excitement and ever-renewed variety to be found in a life among the insane may not be estimated by the uninitiated; nor can they realize just what life in a well ordered insane hospital presents. One can hardly believe what good companions many of the insane make, nor the absorbing dramas enacted behind doors where there is constantly something to appeal to the sympathies or to stimulate the emotions.

Within walls "where faith oft looks on with weary eye" there are many tragedies and many comedies. Each hospital has its own peculiar government, its own code of laws, but in the main the daily routine does not vary, and the fundamental principles are much the same in all.

The day usually beginning at 6 or 6:30 o'clock; the patients, many of them, count the first few waking moments the worst of the day. Sleep has in most cases brought oblivion, no less sweet because temporary, but the eyes once opened, the long day stretches out, bringing to each a keen realization of his or her condition. Breakfast shortly follows with the diversion of cheerful companionship, later emphasized in work, in exercise or in amusement.

Then the physician's visits, and dinner. The afternoon brings work, relaxation or amusement; after which, supper; and later social gatherings in parlors or hall fill out the evening, for all who are able to attend and to appreciate; then sleep—at least for some.

The following gleanings from the note-book of one, while resident physician in one of our large insane hospitals, may prove an interesting revelation of how keenly many of the insane realize their condition, and also the singular appreciation shown, by some cases, of relative values.

The facts are actualities, as are also the conversations,

altho some methods of fiction have been employed in their presentation.

Fictitious names have also, for obvious reasons, been employed and for convenience of reference, the *dramatis personae* are here given.

MISS OGILVY—Aged 29 years. A case of chronic delusional insanity. Cause unassigned, though there appears to have been a combination of adverse influences. Mother, some years previous to her birth, had a severe attack of “nervous prostration.” At six years of age a fall, injured left arm, causing partial atrophy. Up to fifteenth year was apparently normal—bright in her studies, with exceptional memory, when an attack of typhoid fever was followed by “nervous prostration,” with fixed delusions, increasing in violence, until she was with difficulty managed at home and finally was removed to the insane hospital.

Asserting that she frequently receives hard blows, she is continually calling attention to imaginary bruises. Often loses her identity. Declares that her mother is not her mother, because she was told not to say “my mother,” and she has not yet been allowed to do so by the one who forbade it. Is doubtful as to whether she is filling her own place or that of some one else. The medical treatment she receives is not intended for her, but someone who should be here in her place.

When asked if her name is Miss Ogilvy, she replies: “No! I was given that name on my card, and I find that someone responded when that name was spoken, but the remarks made by that person were quite foreign to my personality.” Confused in regard to the details of life and its surroundings, she does not want to remain in her room, thinking it belongs to a young man, and is with difficulty forced to retire, believing she is occupying his bed.

She says: “Some one stands behind my chair and guides my hands so the work is not my own.”

“The painting and writing are very much better than mine, but neither expresses what I wish to express, and I want a room that no one but myself can enter. Then I shall not have to sit with my back to the window to prevent people from standing behind me and interfering.” Unwilling, except under

compulsion, to wear anything that is not of flesh tint, she will frequently hold articles of clothing against her arm to be sure that they match her skin.

At times imagines she is covered with live cats and rises frequently to shake them off.

MR. COBHAM. An Englishman, aged 37 years. A case of chronic mania. Attributed cause, typhus fever. A portrait painter. Married, but after 5 years of unhappiness, was divorced and came to America. Mother a hypochondriac; father insane. The attack of typhus fever was followed by acute mania which, lasting several months, finally lapsed into a condition of intense depression, with lucid intervals. Similar attacks were of yearly periodicity, irritability and excitement, being followed by a condition of quiet, melancholia or depression; then by state of exaltation, during which he imagined he was the greatest poet and artist in the world. Said he could paint anything and everything. Has really painted little or nothing for the past few years, and when asked if he was not afraid he would lose facility from want of practice, he replied: "No! The hand improves by doing nothing—and it all comes by thinking of it."

An egotist, talking freely of his affairs; within a few hours after admission, had unpacked and scattered his effects about—pictures, books and silk-scarfs—in artistic confusion, and had confided his entire history to the other patients.

Claims Modjeska, her husband and Ellen Terry as his friends, and says they will shortly call to see him.

A regular bohemian in his habits, and a free drinker; previous to entering the hospital, he had one morning astonished his club by appearing at breakfast in his night shirt and ulster, bestowing gifts upon everyone he met.

MR. RANSOM; aged 34 years; a lawyer by profession. A case of melancholia.

Always a man of good physical health, nervous, but of correct habits and cheerful disposition. During 6 months of married life, saw but little of his former friends and applying himself with great assiduity to the study of equity, there seemed no apparent cause for this attack.

He became suddenly despondent, losing interest in business

and in society. On one occasion, as he was returning from a party, suddenly threatened to jump into the river.

During the last few weeks has become unduly solicitous about money matters, fearing that he has not sufficient income to defray his expenses. Labouring under the delusion of having ruined many people, he is under constant fear of arrest, expecting at any moment to be taken to prison. Imagines he has injured his partner by losing important papers and letters, and by not paying rent. Has an anxious and suspicious look and constant muscular tremor, especially in the arms and hands.

MR. BENTLEY. Aged 57 years; single. A lawyer by profession. A case of melancholia. Stone deaf and much crippled from rheumatism. Has a niece insane. Naturally inclined to despondency, has some one sleeping near, that he may never be left alone. This, his second attack of melancholia, is similar to one experienced 6 years ago. Awaking suddenly one night, feeling much depressed, and that life was not worth living, would have killed himself had a revolver been at hand. Since then, altho very despondent, has been able to attend somewhat to business. Decided himself to come to the hospital, rather than go to the pleasant home his sister had prepared for him, saying he preferred coming here, that he might be well taken care of, have some one to think for him, and have no responsibility.

Claims he does not wish to recover, and talks continually of suicide.

MR. ARCHER. Aged 24 years; single. High-grade imbecile with intercurrent insanity; a case of *dementia praecox*.

The son of a man of unusual genius—a famous lawyer and diplomat—and the nephew of a well known alienist.

A tall, florid, blonde, well-built young man. At the age of one and one-half years, since a severe illness (nature not stated) has exhibited mental weakness. From 6th to 8th year stammered very badly, and was several years in learning to read. Always a well-behaved boy, but dull and slow. Twice tried for admission to one of our large colleges but failed, and finally, upon entering a small college, was hazed—being placed in a tub and cold water poured down back. After this de-

veloped marked mental peculiarities, with suicidal tendency and delusions, imagining he was to be made way with. This condition of depression lasting several months, was followed by one of excitement.

His father brought suit against the college, but it was proven that the boy was an imbecile.

Traveling for change, he talked freely to any listener of his mental condition and family history, and would propose to any woman he met, the merest acquaintance, in the most frank and open manner.

Seemed to have peculiar ideas of values, and in the use of money, no discretion. Says he is nervous and has lost self-control but thinks he will be all right in a little while. Has choreic movements of muscles of face and eye-lids and whistles constantly. Is an omniverous reader and has a phenomenal memory.

MRS. TULLOCH; aged 41 years. A case of chronic melancholia, caused by ill health. A small, dark, black-haired, black-eyed woman with quick bird-like movements; married; has two children. Husband a rich linen merchant. Was very nervous and excitable before marriage. After birth of first child became morbid, morose and depressed, and finally melancholic. Is at times excited and violent. Once swallowed a quantity of carbolic acid with suicidal intent. Labored under the delusion that her little girl had her arms and legs cut off. Imagined that her husband had given up his business and did not dare write to him for fear he would not get the letters. Says she can think of him and thoughts are better than letters. Destroyed his photograph to save his life.

Has frontal headaches. Runs at times back and forth through the room crying: "Teddy, I know you are dying."

Frequent changes of mood; for no apparent cause; is apt to become irritable; and will unexpectedly throw things at nurse.

MRS. MACKENZIE; Scotch; a widow with no children, aged 54 years; yet has the appearance of a very old woman. A case of acute mania, caused by domestic affliction; broke down during the illness of her husband, to whom she devoted herself day and night. A condition of depression passed into one of great excitement. In perpetual motion, talks incessantly,

with a strong Scotch accent, and refusing to wear her artificial teeth, most incoherently. Sings snatches of old songs, keeping time with her hands and feet. Formerly very neat, has now destructive habits, and constantly attempts to remove clothing. Has developed a haematoma auris of left ear.

MISS VAIZEY; English, aged 29 years. A case of hypochronic melancholia; cause ill health and heredity. Mother confined in an insane hospital 7 months previous to child's birth; suffered from periodic attacks of melancholia. Of patient's three brothers, all insane, two committed suicide as did also a paternal cousin during an attack of acute mania; maternal aunt and her three children also insane.

Dependent upon the bounty of friends and relatives, she was forced to eke out a scanty income by writing stories and poetry for magazines, while for two years undertaking the entire care of her mother. This strain added to her growing inability to walk, on account of uterine trouble caused by a fall from a horse some ten years previous, proved too much, and mental irregularities developed.

For weeks did not sleep over two or three hours out of the twenty-four. Became confused, complained of intense pain in head and passed into an "etherized" state, followed by delusions. Previous to this had always felt afraid to die. Now she thought she ought to die; that it was fated she should not get well, and God wanted her to take her own life. Purchased some laudanum at a drug-store, and when the nurse left the room, swallowed a teaspoonful and was about to take more, when nurse returned. Did not again attempt suicide, tho still possessed with the idea. Next imagined she had hydrophobia. Suddenly emerging from this state, the gradual return of ability to sleep brought relief but not cure. Is subject to relapses.

MRS. PETRE. Aged 28 years, a case of acute mania. A small pallid woman, indifferent to friends, unable to sleep, constantly demanding stimulants, using obscene language and destroying clothing, her condition of noisy excitement has gradually subsided into quietude and lethargy. As a girl at school was pleasant and attractive, at the same time hard to understand; peculiar, willful and always delicate. Father

died of pulmonary tuberculosis; a brother is always in feeble health.

Nervous and sensitive about her approaching marriage, she gave her relatives much concern by her peculiar ideas regarding marital relations. Shortly after marriage went abroad and within three months had an attack of melancholia with delusions of poverty. Within a year had a mis-carriage, and within three and one-half years had given birth to three children, becoming in that time nervous, hysterical, fault-finding and unreasonable with servants. After the birth of a fourth child, she appeared for a time quite well, then lapsed into the present condition of extreme restlessness and irritability.

MRS. WARFIELD; aged 35 years. A case of acute delusional mania. Married; has one son. Father eccentric to the verge of insanity.

Born to wealth, was always a spoiled, petted child, but with good impulses; having her own way, was over-generous and excessively extravagant. Father and husband both lost property, after which her husband took her to live on a ranch in the far west. A cloud-burst destroying everything, her reason became unbalanced; her husband also becoming insane, died in a hospital.

Among other delusions, fancies she has been poisoned with ether, and that it is still in her system. Imagines that she has done something wrong, and talks continually in a low muttering tone of the "Gooda"—a "Mighty Spirit" which lodges at times in the little finger of her left hand.

A great admirer of Emerson. Has a picture of him on her mantle shelf.

Has haematoma auris of the left ear.

MISS LEVY; aged 26 years. A case of acute suicidal mania. Educated abroad, but was slow to learn. Growing moody and depressed, became suddenly unmanageable in an attack of violent mania, with delusions of sight and hearing.

Attempted suicide several times. Once crept out of a 5th story window and hung by the sill; but screaming for help almost immediately, was rescued.

Shows intense jealousy of her sister, who is devoted to

her. Talks constantly about her uselessness, and of killing herself.

MR. PERCY BUCKHEATH; aged 42 years. A case of acute delusional mania. Married and a widower with one son. The spoiled and dissipated son of one of the greatest financiers in the world—a name to conjure with.

A great society and club-man, he squandered money in every possible way, there being no vice to which he was not addicted. Extreme abuse of the laws of health, coupled with a domestic tragedy, brought him finally to the insane hospital.

MR. HEWETT; Aged 40 years. A case of chronic mania—dementia. Father died of cancer—mother of apoplexy. Naturally bright and showing capacity and practical turn of mind, he had, within a few years, built up a large business; then slowly broke down, developing religious delusions.

MRS. SMITH; 37 years old; a case of paranoia. Married and has four children. Has uterine trouble. Parents both eccentric; father a celebrated lawyer. Sister, a well known poetess and one of our most prolific society writers.

Extremely romantic, she spent three years in Europe, studying for the operatic stage and dilates now in most extravagant fashion on her past life and “wonderful education.” At times she will wander in conversation, becoming silly and giggling even when talking on serious subjects. Is fond of writing texts, scraps of poetry and vulgar expressions on the margins of pictures, wall-paper and doors.

Treats her husband, who is a banker in comfortable circumstances, with haughty disdain and has delusions of persecution.

MR. KOPLIK; aged 60 years. A case of general paresis. Had syphilis when a young man.

Married and has two children. A prestidigitator, was an assistant for years to the most celebrated man in that profession; and after his death, travelled for years under his name.

Was arranging for an extraordinarily magnificent entertainment when his mind suddenly gave away.

With delusions of grandeur, at times imagines he is a king.

MRS. FRERE; aged 30 years; married. A case of melancholia.

Grandmother and great-grandmother insane. At the age of 22, after birth of child, had a so-called attack of "nervous prostration." Suffers from delusions; refuses to rise in the morning, believing she has no clothing to wear. Nervous and depressed, picks and rubs face constantly. Escaped one night saying she was going into the river, but returned of her own accord.

MR. HOOD; aged 24 years. A case of acute delusional insanity. Both grandparents died of pulmonary tuberculosis. One sister had an attack of "nervous prostration."

Always a strong boy of excellent habits, when 2 years ago active work in the hardware business became apparently too great a strain; the attributed cause of his present mental break-down.

Despondent and irritable for some months, gradual loss of energy merged into a dazed condition. Has made threats of violence towards mother, and with delusions of persecution and suspicion, thinks his friends, wanting to get him out of the way, have put powders in the air, in his bed and in his food.

For a long time would eat only apples, believing they alone were free from poison.

MISS GAUTIER; aged 25 years. A case of chronic mania and dementia. Of French extraction, her father being first gentleman in waiting to the Duc de N——; her mother died insane.

Is extremely fond of dogs and birds. Has sexual delusions, and during excited attacks is vulgar and profane beyond description.

MISS AMHERST; aged 28 years. A case of circular mania.

Unusually well educated and during lucid intervals bright, interesting and intelligent. Delicate, sensitive and of nervous organization, was much indulged and denied nothing by a wealthy father.

MISS MAITLAND; aged 42 years. A case of recurrent mania.

A highly educated, accomplished lady with pleasing manners. Has moved in the most exclusive society, both here and abroad.

A confirmed masturbator; can derive sexual pleasure by merely crossing her legs, and talking to a man.

MR. PATE; aged 71 years. A case of acute melancholia.

A mill-owner and self-made man of considerable wealth; married, with several children. In 56th year broke down from over-work. Much depressed, is too nervous to read and has but little power of consecutive thought.

MISS LEIGH; aged 39 years. A case of recurrent mania.

An English woman of middle class.

Well educated and when in good mental condition very pleasant; when excited, becomes perfectly wild.

MR. MICHAEL O'DUNNE; aged 65 years. A case of circular mania. Attributed cause, dissipated habits.

A fat, ignorant, little Irishman of the vulgar, rich class. Made his money, it is said, not very honestly.

JANUARY 29TH, 18—.

Saw Mr. Buckheath for the first time this evening. Under the delusion that I was a detective sent by his friends to watch him, he sat silently watching me. Then suddenly becoming excited, smiled ingenuously and holding out his hand in most winning manner, impressed upon me that he was a voluntary patient. Told me how he had been his father's idol, indulged beyond measure, every wish being gratified. Boasted of his wealth; of the amount of money he could spend in a year; described half a dozen chairs in his hall, costing \$500. apiece; told how he had bought a whole house in Cairo, Egypt, at great expense, simply to get a bit of lattice-work which he wanted for his town house.

Related his *amours* and sexual experiences in minute detail and with apparent pleasure. Told of his courtship and marriage; his wife, a charming woman, (which I knew to be true) but of whom however he soon tired, his neglect of her, merging into indifference, dislike, and finally into hate, when after the birth of a son, he had transferred his affections to the wife of an intimate friend. All this time, while unfaithful to wife and false to friend, he was also drinking heavily. Finally, after some years of unhappy married life, when his boy was 10 years old, he placed him in a boarding-school and, with his wife, went abroad for the season. Here their wealth and social position

introduced them into the most exclusive social circles, his wife being much admired by a certain Great Personage and his Consort.

One night near the close of the season, having been invited to a ball at the Royal Palace, just before going he, for no reason whatsoever, became furious with his wife, when she came into his dressing room in a white satin gown, ablaze with diamonds. Going up to him and putting her arms around his neck she said: "Percy, let us begin all over again. We began wrong, but I love you," and held her lips to kiss him. Without replying he flung her to the floor and kicked her.

Then they went to the ball. Altho bruised, she danced and was apparently very gay. The Great Personage was very attentive to her, and the Consort very gracious.

At 2 o'clock her husband placing her in her carriage went off to finish the night with boon companions at cards.

Two hours later he went home to find the house in darkness, and walking up to his wife's room, cursing and swearing, on making a light, found her still in her ball dress, sitting with arms stretched across the table and her face resting on them—dead. She had been taking chloral for some time to make her sleep, and it was said that she had taken an over-dose. "But," he added when he had finished his narration; "this had not the slightest effect upon me, as I have not faith and my heart is hardened."

Then he showed me a complete silver traveling tea-service, one of two only that had been designed of that pattern, the Princess of Wales having bought one and he the other; playing with it and admiring it as a child would a toy, he next exhibited an intaglio ring that had been given to his grandfather by an Italian count whom he had saved from drowning.

Described a set of china, also unique, for which he had paid \$5,000, and had the moulds destroyed.

Related his family history most minutely; told of his step-mother trying to shut him up to get his money.

Suddenly he asked if I thought Guy DeMaupassant was insane.

After thus rambling on for over an hour, he congratulated me on trying to take him out of himself, observing: "I am a

man with a theory. A man with a theory is one who lives on the top of a mountain of his own building, who lacks common sense—is an inspired imbecile—and thinks the rest of the world are fools. And so good night;” and thus he dismissed me.

JANUARY 30TH

During my morning visit, Mrs. Tulloch showed me a large wax doll dressed in white, saying: “This is my little daughter Juliana,” then putting her carefully to bed, tucking in the white silk cover-lid, she began to rock her to and fro, crooning a lullaby in her pathetic, cracked voice, with an expression of longing in her dim, sad eyes.

When I called on Miss Ogilvy, I found a new and very handsome chair in her sitting room. Upon my remarking on its beauty, she replied: “Yes, isn’t it odd? This chair belonged to my great-aunt, and was to have been left me by her. One day I went to a funeral; it was—probably—it must have been —my aunt’s as I have the chair.” Thus she rambled on. She would paint only white flowers in the future, and intended to paint a fruit for every month in the year.

“For March I shall paint candy, as March is my brother’s birth-month, and he likes candy.” Was very enthusiastic over a symphony concert she had attended the day before.

At dinner Miss Levy remarked: “I do not think there is any hope of my recovery. My mind has gone back on me.” As we rose from the table she said: “The next number on the program is for me to go sit in the parlor until my nurse calls for me like a bundle.”

JANUARY 31ST

Sunday. As the church bells rang at 10 o’clock, Mr. Pate listened intently for a moment and then said: “Now the folks at home are preparing for church. Everyone is going and I am shut up here, afraid for my life. Time passes so slowly—why every minute seems to me an hour, every hour a day, and every day a year. I wish I could sleep always for the waking is so terrible.”

FEBRUARY 1ST

When I made my morning visit I found Miss Maitland very lively and would talk of nothing but Mr. Archer. “Isn’t it too bad,” she said, “for such a nice, bright, young man to have

so little ambition? I am doing my best to stimulate him to better things. Doctor, I do hate to have you, a stranger, see me when I am not myself; when I am insane, and not a perfect lady."

FEBRUARY 2ND

Miss Gautier was counting over her handsome rings, of which she has a goodly number. Showed me one set with a large pearl which she claimed was not genuine. The original was, but she lost it, and her sister in replacing it, substituted a Roman pearl. "I do know a real jewel from an imitation," she added, "even if I am insane." Discussing French literature and the many authors that appealed to her she mentioned particularly Pierre Loti's "*Pêcheur D'Islande*" and gave an excellent criticism of it.

FEBRUARY 4TH

Mr. Buckheath greeted me this morning with: "If the devil should come and expound his doctrine, would people believe him? But perhaps I myself am the devil."

Was much excited all day and very unreasonable until evening, when he quieted down.

At bed-time he said: "Oh, if I only had faith, I could get well; but I have faith in nothing at all. I have no affection for my friends. When my father died, I wept a little, but did not feel any real affection for him. So it was when my wife died. I only felt annoyed—not sorry. I am a moral idiot—I have no moral sense." Then turning quickly, said: "Did I see you smiling at my nurse?"

Miss Maitland, weeping copiously, said this evening: "I can't understand it at all, Doctor. This insanity. I have been insane ten years, and ought to understand it by this time."

FEBRUARY 4TH

To-night at tea, Miss Levy asked in her quiet, level voice: "Did you ever hear of anyone who was tired of life and wanted to die? For that is the condition that I am in."

Mrs. Tulloch, who sat opposite, replied quickly: "Why yes, we all dye, and pink is the most becoming color to us all." There was a general laugh at this retort and Miss Levy, brightening up visibly, related her adventures while absent on a week's visit. Said her father proposed that she should go and live

with a widowed cousin, in Indiana, but as it was primarily to benefit her, (Miss Levy) and secondarily to provide for the cousin, she was in a quandary. So she consulted two witches on the subject. One advised her to do as her father wished; the other advised her not; so she followed her own inclinations and returned to the hospital.

This evening, in the middle of a game of billiards, Mrs. Frere turned to Mr. Buckheath, with whom she was playing, and *apropos* of nothing asked: "What do you think your ultimate fate will be? Do you expect to remain in this insane hospital the remainder of your natural life?" This upset him and he fled from the room without replying. When I saw him a few minutes later, he was pacing back and forth in his room muttering: "I am a paranoiac—I am a moral imbecile. I have no natural affection for friends or family." Finally he quieted down.

Later, meeting Mr. Pate in the conservatory, he said to me: "I am here for life—and I am sorry."

Mr. Archer a few minutes after remarked with perfect gravity: "If I were a goose, I would prefer the Sunstrum method of being made into *pate de fois gras*," and without waiting for an answer, passed on, took up a book and began to read. Miss Sunstrum, be it observed, is the teacher of gymnastics.

Mrs. MacKenzie persists in calling her nurse, whose name is Miss Addison—Mrs. Holman. While making my evening visit, she asked if I had ever seen Mr. Holman. I said: "Mr. Holman is apochryphal." "Yes," replied she, "I think he is an apostle."

Irritated because she could not get to drive, she turned to her nurse, saying grandiloquently: "For years I have kept my carriage, and had diamonds and seal-skin coats. Perhaps Mr. Holman didn't, but I did."

FEBRUARY 5TH

For two days Mr. Bentley has absolutely refused food. Gives no reason except that it distresses him. Places hands over abdomen and moans and makes a variety of distressed motions. . Says as he sways to and fro: "If I had only but obeyed the doctors, I would have been sane, but now it is too late. I

am crazy. I hate to go to sleep because I have to wake up again."

Miss Levy at dinner said: "Doctor, did you ever have a patient who wanted to die so constantly as I?" "I," Mrs. Tulloch interrupted quickly with a nervous shrug of her shoulders, "dye pink. It is such a lovely color."

Miss Levy continued: "I want to die so much. When I went to bed last night I prayed I might not waken in this world."

Mrs. Frere, looking up, remarked quietly: "You might as well live on here as anywhere. This is as pleasant as any place."

"Are you going to live here forever?" said Miss Levy, turning to her.

"Yes," replied Mrs. Frere, "I am what is known as a permanent fixture."

Miss Ogilvy exclaimed: "Ah! a table, a curtain, or a lamp fixture?"

Mrs. Frere replied: "A table fixture because I am never invited out to tea—now."

Miss Ogilvy said: "Is that so?" "No" rejoined Mrs. Tulloch, "we none of us sew."

Miss Levy recounted an attempt to commit suicide by jumping from a fifth story window and how, getting frightened, she had drawn back at the last moment. Whereupon, not to be outdone as a *reconteur*, Miss Ogilvy told in minute detail, of visiting a strange person's house and losing her identity, not knowing where she was.

Mr. Buckheath was quite excited to-day, and after again rehearsing the details of his wife's death, said: "Now I am irretrievably lost. I live in a hell of my own making—and the hell is the past. I am lower than the lowest in the world. The Cleveland Street wretches are nothing to me. The awful, wicked things I have done. God is just, but He cannot forgive me, because I am not sorry."

Hearing the ice cracking in the reservoir, opposite, he thought it was a message from God. "It is the second advent" he cried, "and I am damned."

Then abruptly the conversation turned on sleeping cars.

Mr. Archer said that he hated them because the pillows

were so small they stuck in one's ears, so that only a corkscrew could get them out.

His hearing is wonderfully acute. Thus singing to himself while standing at least forty feet away from me, as I observed in a low tone to one of the nurses, "Isn't it sad?"

"What?" he called, and receiving no answer, he followed me repeating: "What is sad?"

"That brains should be affected," I replied. "Oh! well my brain is pretty well gone," he said.

Mrs. Smith spent the morning scribbling on her pictures the titles of books she had read. A copy of "The Woman in White" lay open on her couch and she remarked, "The man's devotion to that insane girl was beautiful." Similarly of Charles and Mary Lamb she noted: "How perfect was his devotion to his sister, and his care of her, how pathetic; truly a life of self-sacrifice as she was insane for so many years."

FEBRUARY 6TH

At breakfast Miss Levy kept repeating: "I want to die—I want to die."

"Well, please dye red," said Mrs. Tulloch, "You are dark, and red will be so becoming to you."

Then Miss Levy continued: "I am so stupid."

"I wish you would make 100 little stoops, and then hush," Mrs. Tulloch rejoined.

"Well," replied Miss Levy, "I will wait until the end comes, then perhaps I can find rest."

Miss Maitland to-day was not quite sure whether she was dead or alive.

I had a photograph of a friend, and Mr. Pate catching sight of it, said: "Yes, he is all right. He is not insane."

When I made my morning visit, Mrs. MacKenzie haughtily requested that I "order up the Spanish horses for Mrs. MacKenzie to go to drive." Then she added pathetically: "But I have no decent dress; when I was sane and at home, my daughter dressed in silk and satin, and I did too. Now I am insane, they make me wear my oldest daughter's old dresses. Think of it! I wearing Sallie's old dresses!"

Mr. Buckheath passed a restless night. Said that at every turn he could see the finger of God pointing at him.

That once God showed him his duty, and he saw a vision of his son asleep at school. God told him it was his duty to take care of that boy and that he, his father, had never taught him anything that was good—only what was bad; to use the devil's instruments—cards and billiards; that at the second advent when God comes to judge all, the beggars in the gutters, and the heathen in Africa would be saved because they had some spark of good in their breasts, but he had not one. They would all be placed on one side of an "uncrossable line" and he, a devil, on the other.

His nurse, going away for the day, called out: "Good-bye Mr. Buckheath." "Good-bye" he replied, "I will be the devil before you get back," and all day he, imagining he was the devil, kept repeating: "If I could only be sorry for what I have done."

Miss Amherst has been talking of giving an afternoon tea. When I made my evening visit, she offered me some candy. "This," she said "is in lieu of the tea; it has dwindled to candy," adding: "this is a pleasant Saturday night and I have tried all week to be bad. But don't write that down in your notes, for perhaps I haven't."

Miss Gautier showed me a photograph of herself when she was eighteen. Told me that she was the original of the girl in "The Story of a Bad Boy," by Thomas Bailey Aldrich. Laughed very heartily over it, saying: "Tom was a mischievous boy; and he did not love me as hard as he thought he did."

FEBRUARY 7TH

This morning while sitting in the parlor, Miss Maitland said she disliked being a mental case, and wished she had some other kind of disease.

Spoke of a domestic tragedy, the details of which were filling the daily press, ending up with: "But the men of that family are all queer."

Mr. Archer, apparently buried in a book, immediately looked up and pursuing the subject of "queerness" wondered "if they were queer enough to be insane."

Mrs. Frere finished "Bonaventure" with the criticism: "I like it so much better than Amelie Rives' Quick or the Dead; it is as bad as a French novel." Some one observed that it was simply the outpourings of the heart of an innocent girl.

"Well," she said, "from what I have read I think her an uninnocent girl."

Miss Ogilvy was much confused to-day. Perturbed over some handkerchiefs, she heard that a friend had brought her from abroad; she could not imagine how they ever came into her possession; whether she had called on her friend to get them or the friend had brought them to her. Had bought a spoon for her aunt's silver wedding, and was also puzzled as to how it came into her possession. Complained that her nurse, who slept with her, came into her room while she was dressing, and it was most obnoxious to have strangers present when she was dressing; had not been used to it.

Mrs. Tulloch greeted me with: "This is Sunday and without church it is such a long day, until at length sleep brings forgetfulness and peace."

Toward evening Mr. Buckheath became excited and afraid of everything, but finally quieted down and told the story of a neurologist, of world-wide fame, whom he had once consulted by the advice of friends. After a short conversation on general subjects, quite apart from medicine, the doctor had said: "Go home and I will dine with you this evening. Mind you have a good dinner, and just you and me." He came and talked delightfully, and then sent him a bill for \$25.00.

Miss Levy constantly wailed thru the day: "I am hopelessly insane, and have nothing at all in my head. It is empty."

Mrs. Warfield informed me that there was an awful scandal afloat, and when asked what it was, replied: "Emerson is alive! I saw him ride by in a sleigh." She told me of a lady who had had her cross eye cut, and then fell in love with the doctor who operated, attracted by his beautiful eyes, adding: "I thought you were the Doctor until I looked into your eyes; but they are not beautiful, and you are not the man, for you are cock-eyed too."

Miss Vaizey at breakfast was telling of a classical play she was writing. "The morbid creature," ejaculated Mrs. Frere. "She write a classical play. Pish."

FEBRUARY 8TH

Mr. Archer asked if Mr. Buckheath was not better and Mr. Pate replied, sadly: "Yes he is better—much better—

near going home—home—home—dear, dear home.”

FEBRUARY 9TH

A relief nurse, detailed to watch Mrs. Warfield and Mrs. MacKenzie while the nurses were at dinner, kept her foot against Mrs. MacKenzie's screen door, while the old lady paced up and down like a caged lioness. Hearing my step, she called: “Dr. Barr, did you ever? I am Mrs. Geo. W. MacKenzie, the queen, and one would think I was a very wild beast. Order the Spanish horses and the carriage.” Constantly asks for her husband.

In a discussion to-day, Mrs. Smith remarked: “There is so much in a name, and Smith is not romantic. Have you heard,” she added, “of the Sterns who went to Europe and returned, calling themselves the St. Ern's?”

“Urns!” asked Mr. Archer, “Were they crematists?”

“No,” she replied, casting a languishing glance at him, “but even a hotel or town is more attractive if it has a pretty name. Now Smithville would not be at all romantic, but Archerville would be lovely. One would think of flowers, and perfumes, and the beautiful blue sky, and rippling water.”

“Yes,” replied Mr. Archer, “You are right. Smithville reminds one of goats and tomato cans, ash-heaps and old rags.”

“You are very rude and vulgar,” rejoined Mrs. Smith, “but you are truthful.”

Mrs. Frere is in a facetious mood to-day. “Tell me, good people,” she asked, “if I were in the second story of the hospital, and a fire should break out, which way would I go down? You don't know? Why the stair-way of course. Now guess what I saw to-day that would tickle you? What? Why just a straw.” Then pointing to her eyebrows, she asked: “Doctor, didn't you always think these were your eyebrows?” “Well,” as I nodded, “they're not, they're mine. Now tell me why married persons should not ride donkeys? No? You cannot? Because what God has joined together, man should not put assunder.”

Miss Ogilvy was again in a muddle. Her blue and white striped blouse matched Mr. Archer's trousers, and she was not sure whether she was herself or him; could not determine. Mr. Archer gravely proposed that they should take it day about:

he wearing her blouse and she his breeches. As she was very short and thin, and he tall and stout, there was another puzzle as how to manage it.

"Perhaps you can tell me, why a man is like a telescope?" Miss Leigh asked, but no one could answer. "Because a woman can draw him out, look through him and shut him up again." "And" rejoined Mr. Archer, "a woman is like an umbrella, because a man can easily shut her up."

Miss Maitland, weeping copiously, showed her portrait painted in her youth. "Why," she exclaimed, "did my friends send me this? I am tired enough looking at myself in the glass, God knows. I am tired of living."

Mr. Koplik greeted me with: "Dear Doctor, advance, my Court Physician—a bit of licorice, please."

Mike O'Dunne went to walk, picked up a frozen toad, and before his attendant could interfere, chewed and swallowed it, with no bad results.

FEBRUARY 10TH

Miss Ogilvy, sewing without her glasses, elicited from Mr. Archer the caution: "Be careful or you will prick a hole in your nose." "If I do," she replied, "I will wear a ring in it as I do in my ears."

Mr. Buchkeath, walking this morning with his nurse, remarked: "I wonder if I am getting better? If I do it is in a zig-zag way. It's like playing foot-ball. When you cry 'down' you are 'up' again. It's a bit of d——d nonsense to have one insane patient trotting around, followed by a lot of girls and boys called nurses."

Miss Amherst said: "It's getting monotonous—my being called the loveliest patient in this hospital, because I behave myself decently."

Mr. Koplik, meeting me at the door of his room, welcomed me with: "Here comes my little treasure. Doctor, the finest goods come in the smallest packages. A little licorice please."

Then he showed me some sleight of hand tricks with cards, after which, getting tired, he opened the door and bowed me out most courteously, but as I lingered for a moment on the threshold he forgot his politeness, pushed me out and banged the door.

"Last night," Miss Levy said, "I seriously contemplated jumping from the window."

"A very easy thing to do," replied Mr. Archer, "just bend your knees, leap upward and light on your toes. It would be a graceful movement according to the Swedish system of gymnastics."

"But it was snowing. It always snows when I contemplate suicide," she replied.

"For that," interposed Miss Ogilvy, "you ought to be thankful, for the snow would be so soft to light on."

"Miss Vaisey, you look as if you were ready for your coffin," Mrs. Petre said. "Hush," spoke Mr. Archer, "that is a very grave subject."

I found Mrs. Tulloch with a lot of toy sheep on the floor, playing with a doll, saying: "I am thinking of my little boys at home." Looking up and seeing blue-prints in my hand, she exclaimed: "I have often heard of blue devils, and never saw one before, but now I do."

Some one told a story in the parlor this evening, of a man keeping his chewing tobacco in a tree. "I presume," Miss Leigh remarked, "he could not choose (chews) but do it." Mr. Archer observed: "But he might have *es*-chewed it."

Upon Mrs. Smith boasting of her illustrious ancestors, and of being descended from a duke, he exclaimed: "My, what a fall—from a duke to a Smith."

FEBRUARY 12TH

At breakfast I told of how, in trying to step over a negro woman, who had taken the seat beside me, in a day coach, I accidentally stepped into her lap. "Why, I thought you were a Delawarian," said Mr. Archer, "and it seems that you are a Laplander."

Mrs. Warfield told me she had good news, and when I asked her what it was, she replied: "Sympathy—that is always good."

Mrs. Tulloch exclaimed: "I am as *ennuyee* as a hare eating shavings."

Miss Levy said: "I feel so holy in the morning when I get up," to which Miss Leigh replied: "It is because you are hungry. That is the time when one feels to perfection the emptiness of life."

Miss Maitland remarked sadly: "Isn't it too bad, that all the wealth I now have, all the beauty I possessed, and all the time consumed on my education should be wasted? What an awful ending for the life of a pretty girl to bring up in the end in a mad-house, by courtesy called a sanatorium. I am so weary of my life, so weary of everything, so weary of being insane." Then suddenly brightening up she described a painting by Salvator Rosa, that she owned.

FEBRUARY 13TH

At breakfast Miss Levy was saying: "I am so unhappy."

"So am I," replied Miss Leigh, "but I know what would make me happy," glancing at the dish of fruit. "I can put my hand right on it."

"Mr. Pate sits on one side of you and Mrs. Frere the other; which is the thing you refer to?"

"Oh!" replied Miss Leigh, "that was a *lapsus linguae*."

"Rather, I should say it was a '*lapsus finge*,'" said Mrs. Tulloch.

Miss Levy, after dinner, remarked: "There is no good in me." "That is funny," Mrs. Tulloch observed, "the dinner was particularly nice, and you ate a big one. I should think you were full of good." "Well," she replied, "my head is empty."

"A good place to put something," Miss Leigh added.

Mrs. Tulloch said she loved a fur rug.

Mrs. Frere rejoined: "We'll go and spend the night in a fir tree."

"No," said Mrs. Tulloch, "I prefer a rug, and I am rugged enough to lie on one."

Mr. Buckheath repeated the story of his abuse of his wife, going into every detail; and that once when he had been particularly nasty, she had told him he would be sorry for it; and now he was doubly punished. Very suspicious; said no one felt any pity for him, because he had no pity for anyone else, and that his step-mother was coming to arrange for his permanent sequestration.

Sitting in the parlor in the afternoon, a nurse was laughing and talking rather loudly. Mr. Archer, buried in a book,

suddenly looked up remarking; "Heavens! what a voice and laugh that woman has. She reminds me of an eight-day clock. Wind her up once a week and off she goes."

"Just think," Miss Gautier exclaimed, "I dreamed last night that Queen Victoria was in the kitchen teaching me a jig."

"You are very impolite," rejoined Mrs. MacKenzie, "I was in the kitchen for I am the Queen of Europe, and have just been crowned poetess-laureate of the whole world."

Said Mr. Pate: "Doctor, you don't know what my life is. The body is alive but my mind is dead—worse than dead. It is a death in life. I get up in the morning early and walk my room. Then the dreadful noises in my brain begin. Just at day-light I become conscious. I am not fully awake. Then I lie still trying to imagine that I am home again. I do sometimes half think so. Then comes the dreadful reality, and I am wide awake and know that I am insane. Time goes so slowly—every hour is a day, every day a month, every month a century. No, Doctor, you cannot know my suffering and I realize my condition. There is not one lazy bone in my body—no not one. But I worked too hard and fifteen years ago broke down mentally. Then I was cured, and now it has come again. How I dread each day that comes. It is wake, dress, eat, exist and sleep. When that poor foolish girl, (referring to Miss Levy) speaks of her troubles, she only expresses my own feelings."

Mr. Archer asked Miss Amherst what church she attended. "Why, 'The Church'," she replied.

"Do you mean the Episcopal?" he asked.

"Yes" she replied. When I say 'Church' I mean either the Episcopal or the Catholic; when I say 'meeting' I mean Unitarian, Presbyterian or Methodist; and I never eat meat on Friday, unless it is chicken, of which I am very fond.

FEBRUARY 15TH

Miss Ogilvy does not think it nice to be sent into the back yard to walk. "I presume it is a back yard because it is back of the house, and there are vegetables there. *Ergo*—it is a back yard. I cannot shake off the cats there because they will mount

on the fence and jump all over me." To-day again mixed identity with Mr. Archer.

In making my morning rounds, Miss Amherst called: "Come in, d—— you." "Did you swear?" asked the nurse.

"Yes I did. I haven't said it for ages, but I used to swear frightfully."

"Well, never let me hear you say such a thing again," rejoined the nurse.

"All right, only keep your head, and I won't. If you lose your head, I will."

Mrs. Petre's greeting was: "Hello, Baby, come in. How is Mr. Pate?"

"Very well," I answered.

"How can that be, darling? He is dead. Died of a cracked and broken brain."

Called on Mrs. Tulloch and asked if I might sit down and stay for five minutes.

"Yes," she said, "but no longer. Emerson allowed his visitors only ten minutes." I remained eight; she then said I might send the other two on to Emerson.

At dinner she was very cross, claiming it was nothing but a lunch, and upon the house-keeper making a conciliatory remark, she replied: "What I said is the truth, but I ought not to have told it. I have always been told I must not speak the truth; that it hurt."

Mr. Buckheath was reading "Romola," and looking up, remarked: "I am just like Tito—as ungrateful as he."

Miss Leigh was much troubled because three men might possibly propose to her at one time. She did not know how to dispose of her hands if she accepted all three. She could give her left hand to one man, her right to another, but how to give both hands to the one in front was too much for her.

"When a man stumps his toe he says the D——; what is the word?" asked Mrs. Mackenzie.

"The devil," I replied.

"Resist the old man, and he will flee from you," was her immediate rejoinder. "Get behind me Satan; I don't say the word you said. I even pass it over when I read. Have you seen Mr. MacKenzie? I have not seen him, but I met his pants. An attendant had them on. Are you a descendant of Shem, Ham or Japhet?"

(TO BE CONTINUED.)

PERJURY BY THE INSANE.*

By JAS. G. KIERNAN, M. D.,

Chicago, Ill.

Fellow Chicago Academy of Medicine, Foreign Associate Member French Medico-Psychological Association; Honorary Member Chicago Neurologic Society, Honorary President Section of Nervous and Mental Diseases Pan-American Congress 1893, Chairman Section on Nervous and Mental Diseases American Medical Association 1894; Professor Neurology Chicago Post-Graduate School 1903, Professor of Nervous and Mental Diseases Milwaukee Medical College 1894-5; Professor of Nervous and Mental Diseases Illinois Medical College 1905; Professor of Forensic Psychiatry Kent-Chicago College of Law.

HERE is an egocentric tendency of paranoiacs and hypomelancholiacs to throw themselves mentally into an existing sensational case; the first from a species of egocentrically distorted chivalry; the last from a delusion as to personal wickedness and responsibility for evil in others. Strikingly illustrative cases of this often occur.

A gentleman of high social position instituted divorce proceedings. The wife's innocence was strongly asserted and firmly believed. Counter charges of conspiracy and perjury were brought against the husband and his witnesses. The wife was disordered in intellect (produced, it was asserted, by the conduct of the husband,) which precluded her from taking any part or affording any assistance toward her own defense, which was vigorously sustained by friends firmly convinced of her innocence. The inquiry lasted for nearly four years, at length reached the House of Lords, where the case on behalf of the husband had just terminated at the Easter recess. On the House reassembling, an elderly, respectable looking

* Continued from May, 1912.

clergyman deposed that six or seven years before he had been an actual eye-witness of the guilt of the lady. He swore that he had never mentioned the circumstances during the six years that had elapsed but to one person, then dead. He had permitted his daughters and sisters to be intimate with the lady whom he accused. He was unable to fix the time of the occurrence even as to the year in which it took place, or to state who was the paramour. Every avenue of contradiction was thus cut off. The story was left to stand or fall, according to whether respectable character and social position of the witness and his apparent conviction, or the improbable nature of that story itself, coupled with the fact that, during a most searching investigation carried on by adverse parties with the utmost eagerness for four or five years, no circumstance in any degree corroborating his story ever came to light, might be considered to be entitled to the greater weight. Within a few months the clergyman gave himself up to justice, declaring with every expression of contrition that he had been guilty of forging certain bills of exchange, that they had nearly reached maturity, that he had no means of providing for them, that detection was inevitable, and that he wished to anticipate the blow and make such preparation as was in his power by a full acknowledgment of his guilt. Upon investigation not the slightest foundation for his story was found.

Perhaps the most strikingly illustrative case of recent paranoiac perjury was that of Caldwell in the Druce-Duke of Portland Peerage case. Caldwell was born in Ireland in 1834, of parentage which always was a mystery. He went to London when 19 years old, and according to his own story, for a time was in the service of the Duke of Portland, an eccentric nobleman.

He came to New York in 1871 and obtained employment with A. T. Stewart, the great dry goods merchant. His connection with Mr. Stewart brought him more publicity in after life, when he made affidavits setting forth that the body of Mr. Stewart had been stolen by ghouls and also charging that Mr. Stewart's will had been forged for the benefit of certain devisees.

According to the alienists who have studied Caldwell's

mental eccentricities at Ward's Island for the last two years, he was affected with a "twist" of the brain which made him veritably a Baron Munchausen, differing only from that celebrated character in that he believed all the fictions of his brain, strange and impossible though they were. He was queer in many respects, but painfully punctilious and truthful in the ordinary matters of life.

Caldwell's last appearance in public was in December, 1907. He had been completely discredited at the last renewal of the Druce litigation in England. While the British authorities were arguing among themselves as to what steps to take against him, Caldwell slipped away from London and arrived unexpectedly in New York City on Dec. 22. He was arrested immediately on a warrant sworn out by the British consul, charging him with willful perjury in the Druce case, but on account of his broken physical condition the authorities here declined to allow his extradition and after various vicissitudes he was committed to the Ward's Island insane hospital.

The story of the last Druce trial is still fresh in the public mind. It was early in 1907 that George Hollamby Druce, a grandson of Thomas Charles Druce, formerly owner of a bazaar in Baker street, London, began an action to oust Lord Howard de Walden from the property which his father had inherited from the fifth Duke of Portland, through the supposed failure of a direct line. The duke died in 1864, when Caldwell was in London, and this fact, it appears, was responsible for the appearance of Caldwell in the suit as witness.

In this action Herbert Druce, a relative of the claimant, testified that he was present at the funeral of Mr. Druce and that he saw the body in the coffin. George Hollamby Druce thereupon caused the arrest of his kinsman for perjury, and it was at the trial of this case in London, in November, 1907, that Caldwell re-entered the arena with as remarkable a story as was ever told on the witness stand. He testified that he knew both the duke and Druce, and that they were one and the same person. He supplemented this startling statement with another, to the effect that when Druce was supposed to have died his coffin was filled with lead and buried after a mock funeral, in which the duke himself participated.

He maintained that the duke, under the name of Druce, had married and had several children, and that the claimant was a grandson. The statement as to the coffin filled with lead was disproved on Dec. 30, 1907, when it was exhumed and the body identified.

(To be continued.)

THERAPEUTIC PATHO-PROPHYLAXIS IN PRESCRIPTION WRITING.

The Peril of Unauthorized Prescription Renewals.

"Pharmacist will retain this prescription, neither copy nor repeat without instructions from me. C. H. Hughes."

BY THE EDITOR.

TAKING the above caption from the writer's prescription blanks in the practice of medicine and after long observation of the wrong results to patients of the unauthorized voluntary repetition of prescriptions, (written mostly by other physicians and formerly for a while by the writer), he would here call attention to the error in practice of physicians neglecting to enjoin against permitting the repeating of prescriptions for internal use, except the impossibly harmful for long continuance, without special medical authorization for each particular case.

The prescription represents the doctor's conclusion after an examination, as to the medicine or the combination of medicines for a particular symptom grouping or to meet the suggestion or demand of a deeper diagnosis; the quantity and dosage of the medicine thus directed having been determined upon for a particular time and person, based on condition requiring remedy as ascertained by skilled medical examination.

For the prescription to be passed to some one else or renewed by the patient at his pleasure, unless he be a physician himself, or to be refilled by an unmedically skilled pharmacist, is likely to prove to be an error in most cases. The consequences have also often been grave, even fatal, as in the case of the unskilled employment of patent and proprietary medicines, especially the alcoholized and otherwise toxic preparations containing opium, cocaine, cannabis indica, absinth, etc.

Everyone knows of the serious consequences of continued unmedically regulated renewals of narcotics, the fatal drug habits, etc. likely to follow, but any prescription for one person or occasion is not usually the best for another person or another time of illness, nor for voluntary renewals.

The practice of the erroneous promiscuous and too long unauthorized repetition of our prescriptions can be largely corrected by captioning them "non repetatur" and assuring ourselves that the druggist obeys our instructions. Great harm to patient, community and pharmacist may thus be avoided.

By this vicious habit of unauthorized prescription renewal, good doctors, long ago dead, are kept at the practice of medicine while entombed, practicing in a manner they would not approve, if alive. The writer has heard of living doctors whose entire line of special prescriptions have been filled *ad libitum* by an unethical and unconscionable druggist, even during the life of the original prescriber, not alert as to the peril of this proceeding and its wrong to physicians and public.

De Quincey, whose "Confessions of an Opium Eater" startled humanity and even the medical profession in his day, brought upon himself that Iliad of woes he so forcefully described and warned against, by self repetition of a prescription of laudanum, an alcoholized tincture of opium.

It is not recorded that Paul's advice to Timothy of "a little wine" for the latter's "stomach's sake and oft infirmities," was concurred in by Luke, the good physician of scripture record, but it would not be a safe prescription procedure as to the use of wines and fermented liquors, seductive cocktails, juleps and other too palatable mixed drinks of our bibulous day. To orally advise a patient to take a drink of whiskey, rum or brandy at his discretion before or after meals (as is too often done) is to risk the beginning of counselled ruin, especially if the recipient of such ruinous advice should possess an impressive inherent latent aptitude of neuropathic instability, or the drink or drug habit propensity.

The prescription, especially of narcotic and habit forming medicines for internal use, should be disguised and never permitted to pass beyond the supervision and regulation of the prescriber and no one else should be allowed, as a rule, to decide

upon its repetition. Otherwise, ignorance of these essentials may take the place of the physician's knowledge and pervert the intention of the doctor. Doses and repetition thereof and the entire prescription is presumed to be and should always be the product of skilled medical consideration. The doctor knows the quantity, quality, proportions and purpose of the prescribed preparation.

This knowledge qualifying for the direction and disposal of the prescription, no one else is presumed to possess, not even the sometimes too presumptuous and ignorant or indifferent pharmacist, such as passes over his counter, careless of consequences, cocaine, opium, patent medicines, masked alcoholics, cannabis-Indica, carbolic acid, strychnine and poisons for more immediate suicide, like the cyanides.

Even those all wise trained nurses who sometimes embarrass the doctor's good purposes, like the anopheles when the window or door screens are absent or neglected and open, should not be injudiciously entrusted with so great a discretion as the repetition, on his or her judgment alone, of the doctor's prescription.

This is a grave subject and its inadequate appreciation may lead to the grave, as has too often happened in the wake of the indifferent prescriber, dispenser, patent medicine man or other unauthorized pharmaceutical refiller, the latter being more criminal than the substitutor. It may unfortunately be said, as Dr. Oliver Wendell Holmes said of the last leaf on the tree, concerning the sad results of the unprotected, unguarded, unrestricted prescription and its prevention, considering the old doctor,

"The mossy marbles rest
O'er the lips that he had pressed
In their bloom
And the names he loved to hear
Have been carved for many a year
On the tomb."

Many of his patients of the past are dead, and some lately living are in their graves or in insane asylums because of an unrestricted, unguarded, narcotic prescription too habitually renewed, or dead from other causes, by too long reliance on a non-indicated prescription renewal, postponing the real medical relief needed till the cure stage shall have passed, even if the

* Mayhap in his own family.

greatest skill be later tardily summoned. Many lives are lost by delayed summons of right and timely medical relief.

Looking back to my early days in medicine, there were fads and faddists in therapeutics as there are now and destined to die out, some of them, as now. Among them was the fad of alcohol as a remedy for tuberculosis, then called phthisis, usually phthisis pulmonalis. Among the votaries of that fatal fad was a friend and Professor of *Materia Medica* in a certain college, whose faith was so great that he, being threatened as he thought, though he only had the neurasthenic and laryngeal irritation of nervous debility, began to take whiskey regularly himself and he later took it too often and too largely, to his ruin, financially, mentally and physically. He became thereby impoverished in mind, body and estate, lost his practice, his professorship and his property. Alcoholics developed or brought into morbid activity the latent psychopathy of his.

The psychopathic and neuropathic prophylaxis of refraining from prescribing for the patient's voluntary renewal of opium, coca, chloral, chloroform and other preparations, has come to be pretty well understood and deplored by the medical profession, but not yet seriously enough considered by certain pharmacists, proprietaries and patent medicine promoters and the danger of so prescribing alcoholics and especially the verbal direction of this poison for voluntary use, is far from being so wisely, cautiously and eugenically considered generally as should be.

An injunction to the dispensing pharmacist, such as we have placed at the head of this communication, would be also a notification to courts that have sometimes decided adversely to the physician's property rights in his written prescription after it has passed from his hands, which however are the same as though this written direction had been verbally given. The prescription is only for the quantity, dosage and limited duration and amount designated and to the person for whom and the condition for which it is prescribed—not for some other time and condition to be diagnosticated by the patient for himself or for other person or upon promiscuous and ignorant non-medical diagnosis.

The prescription is an individual and limited therapeutic direction and not intended for a community of people. It might be even better than our own brief prescription explanation if this memorandum should be on every prescription blank, viz:

"This prescription is for the person only for whom it is prescribed, for this time, this quantity and this dosage only, and is not to be renewed or passed to others, for medical use, without the prescriber's re-examination and further direction, suitable to the condition of the patient or without approval of another physician after due medical examination." It is wise from many more considerations than have here been indicated, to keep rightful, cautious, skillful watch over our prescriptions after they leave our hands. One of the great harmful results of the disseminated, unrestricted prescription is the community skepticism, liable to be engendered from its abortive misuse for conditions not contemplated for remedy by the original prescriber.

This results in bad psychiatry for both the doctor's standing and for the good of the people. The custom we condemn is psychopathic for both and should be prevented by medical injunction, custom and legal statute if necessary. There is then obviously a non-eugenic and non-euthenic aspect to neglectful and unwary prescription writing and the unlimited promiscuous refilling of prescriptions, which might profitably be considered more at length by the pharmaceutical reader (as well as the physician and the patient) who, if duly watchful of the career of the unrestricted, often refilled prescription, could give us record of many fatalities and much physical and mental ruin, otherwise preventable, but now attendant upon the destructive career of the beneficially designed, but wrongly extended and pervertingly used, prescription.

Finally every consideration of interest of physician, pharmacist, patient and public welfare enjoins *non repelition* for our prescriptions, for internal use especially.

It is inexplicable, the duration of the sustaining effect in some habitues, of very large doses. An actor habituate to morphine, a patient of mine, would take at a single dose a drachm vial of the sulphate salt (four grammes lacking six grains) every third day—that is with an interval of forty-eight hours be-

tween repetitions. Once attempting to do without his usual third day dose he fell, while acting, because of a fit of vertigo that caused him to come to me. My remedy was to quite rapidly, though gradually, restore his accustomed enormous dosage to one half and then to gradually reduce the remaining dosage by substitution of quinine, ammonium bromide, etc., alvine eliminants and tonics and a bis die gradually reduced dosage of the salt and substitutes, medical nutrients, etc. but he never entirely abandoned the pernicious habit.

Though this is not wholly germane, we place it here for want of time for another and more appropriate paper for such cases. We had never before, nor have we since seen record of so large a quantity, even with fatal effect, taken at once, the highest quantity taken to our knowledge being thirty to thirty-six grains daily, in ter die ten or twelve grain doses. We have seen men and women leading an apparently normal life on this daily amount for a time but the final toxic climax of mental nerve center and visceral and intestinal damage finally came to all. Many died of too sudden and complete accustomed drug deprivation, as they do now frequently under the unwisdom of complete and abrupt enforced abstinence by ignorant police, penal and eleemosynary mandate. We have seen death in an abstaining habituate result from a sudden resumption of the original maximum dose.

Indifference of physicians as to the fate of their prescriptions is responsible for the overgrowth of the patent medicine evil and the multiplication of proprietaries, good, bad and indifferent, offered back to physicians and to the public sometimes by wealth aspiring drug clerks, as well as by well meaning, reputable and meritorious medical catering firms. These are also sometimes commended for extended uses beyond the original purpose of the medical prescriber.

While there are many good proprietary medicines, the younger members of the profession are being too much assisted by business prompted and promotive proprietary suggestion in certain directions. Too often defective in therapeutic knowledge, young physicians do not all discriminate as they should, the good from the bad proprietaries.

The chairs of *materia medica* and therapeutics in our

colleges are teaching the marvels of serum bacterio, glandular and hemotherapy. They should devote time also to teaching students prescription writing and medicine selection of the good from the pernicious proprietary remedies, some of which are misleading in regard to composition and medical virtue.

APOLOGETIC.

The *Alienist and Neurologist* has waited long to see some features not preeminently neurological nor psychological, of the contribution here above presented, in the weeklies and monthlies of general medicine, but it has waited in vain. Other practical features of medical practice, conservative of professional and popular welfare may find space in our editorial contributions in later numbers, especially connected with the psychiatry of medical practice, a subject quite as important in all departments of therapeutics as materia medica, alexin, serum or hemotherapy. Influence of brain and mind over visceral and blood states should be rightly understood and duly considered in all treatment, also.

PSYCHIC TREATMENT OF SPIRIT AND DRUG NEUROSIS.

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TWO marked changes are noted in all spirit and drug takers. One of them is physical, and is noted by changes in the face, eyes, tone of voice, manner of walking and general expression and control. The heart is irritable and deranged in its action. There is muscular feebleness, nutrient disturbances, with insomnia and unusual emotional excitement or depression. The general health, conduct and appearance, as well as capacity, of the person is changed. A second change of symptom noted, is the psychic one. The person is bold, assertive, egotistical or the opposite. His former manner of hopefulness or depression is altered. Where he was frank before, he is now secretive, untruthful, unreasoning, has little respect for his words and statements, incurs obligations, asserts or denies emphatically matters of no consequence. His general appearance and pride of character are lowered. These symptoms may be unnoticed in the early stages but later they are prominent. Both the physical and psychic are intimately associated with each other, yet from the very beginning there may be marked differences in the prominence and intensity of either one or the other, indicating the direction of the most active degeneration. It is the study of these conditions that suggests lines of treatment that are practical. To the patient and his friends there appears no evidence of mental changes. He will claim to be strong, both in mind and body, and exaggerate some minor symptoms of functional derangements as responsible for his conduct and thought. These views are confirmed by the opinions of his friends and often by the physician. The theory is that it is

a mere question of vice and careless yielding to the surroundings. Any symptoms of disease are considered insignificant, requiring little or no treatment. It is the prevalence of these theories that has made it possible for over a hundred Quack Homes, with probably a thousand patients under treatment, all based on the assertions that they have discovered specific remedies for the disease to exist. The fact of using spirits and drugs for their effects any length of time should never be considered insignificant or unimportant. This should always create new interest to discover the changes and degenerations, both physical and psychical, that always follow the use of spirits and drugs. There should be no doubt of the variations, defects and departures from the normal, which can be traced and studied with as much certainty as any other disease. Such a study along the following lines will bring out the facts beyond question. First, how far has this condition been due to hereditary defects? What diseases have been common in the family, and what neurotic tendencies have been transmitted directly or indirectly? Inquiry into the nutrition and surroundings, the growth, culture, traumatisms and diseases of early or later life will bring out new facts. Nutrition and traumatism are very important factors in a great variety of organic derangements, associated with low vitality, and feeble resisting power, which frequently merge into spirit and drug taking. If this study is carried into the psychic realm, and notes made of the integrity of the senses, emotional control, the influence of surroundings, home life, occupation, training and purpose in life, a new class of facts will be gathered from which to judge the case. It is from this study that the psychic and physical degenerations appear, also the question, which is the most prominent. The physical is always regarded as transient and the psychic, or the question of vice and morals and general weakness, the most prominent. For the cure of the latter, prayers and pledges are offered, and appeals to the moral side are supposed to stimulate and rouse up some weak will, from which escape by faith and conversion will follow.

The element of fear and suffering is kept prominent in the legal methods by fine and imprisonment, and the supposed humiliation and loss of pride which follows, is thought to give a

certain strength for final restoration. In these theories there is no recognition of the exact conditions, and of course the treatment is destructive and irrational. All patients should be examined with care, to determine every deviation from the normal. In the treatment the toxic and inflammatory conditions should receive the first attention and never be lost sight of, in all after remedial efforts. The prominence of either the psychic or physical disturbances will determine which is the most seriously affected. In the psychical study many cases exhibit an egoism that borders on the paretic, with its peculiar delusions and deliriums. The patient claims to have perfect control of himself and ability to abstain from all spirits and drugs at will. He is confident that his weakness depends upon the unreasonable efforts of friends to help him, and that his own judgment of his condition, and its needs, is more accurate, and if carried out would enable him to recover. With this is a common delusion that a moderate use of spirits is an ideal state, which is always possible. The intensity with which he defends his conduct resembles many of the symptoms common in paresis. Another psychic symptom is that of confusional excitement and weakness, and intense efforts to explain why spirits and drugs are used. This is often seen in periodic drinkers who, after the subsidence of the drink paroxysm, are greatly excited and intense in their apologies and explanations. Usually this turns on beliefs of persecution and faults of others, as well as the surroundings. In this there is depression and often contrition with convictions that it will never occur again. The most positive assertions will be made that he will never use spirits or drugs any more, and these statements are often accepted by friends as facts.

A third class of psychic disturbances is a general negative one. The patient is depressed and gives no reason for his conduct, calls it fate and despairs of any change. A common explanation is, that he is worried, angry, and did not care what he did, or that he used spirits to spite someone. Often times occupation and surroundings are explained as active causes. These conditions are very complex and combine one with the other. In jails and insane asylums they are all recognized as moral defects, which may possibly grow less with an increasing

physical vigor. In private hospitals where their gravity is recognized, they suggest lines of treatment of equal value to that of the physical. To treat one and not the other is to fail. To treat them both, giving special reference to that which is most prominent, is the highest practical science of today. One of the questions in the psychic treatment, is whether the patient should have profound psychic impressions, by a sudden or gradual process. If the person is egotistical, with distinct delusions of his strength and capacity, it is wise to use the most impressive means to shock and break up his present range of thought. If with his egotism there is pride of family ties, social connections and ambition to take rank in the world, a sudden mental resolution is desirable. One of the ways to accomplish this is to make a very impressive examination, particularly with instruments of precision, measuring every possible function and state of the body, and securing pronounced evidence of his perilous condition. This may be assisted by the use of drugs and electrical appliances and powerful suggestions, in a way that will produce a form of physical shock on the patient's mind; also a literal hypnotic control which should be followed by the most pronounced means and measures. This control must be increased, and the mind led by gradual stages into new efforts and new purposes, thus, literally trained out of its old reasonings. This is sometimes done by evidence that impresses the senses as much as the mind. If the patient is a business man, the questions of values and losses can be made prominent. If an educated professional man, facts and their meanings and the laws which control them will increase such impressions. The second method is to approach the psychical by gradual changes, and seek to turn the mind into other channels and ranges of thought. Practical illustrations are as follows: A lawyer who had sense of color was led to take up the study of plants and flowers, with the possibilities of changing the combination of colors. In this way his mind was led into a new range of mentality, resulting in a perfect recovery, and the development of a new mental control power which followed him through life. In another instance a mechanic developed a most intense passion for the study of French. This was a new road out of the past and this psychic impulse dominated all

his after life. In another instance a lawyer was encouraged to take up the study of heredity, and this became a hypnotic force controlling his future. It is often possible to discover latent ambitions and tendencies of the psychic life, which have been suppressed. It is the gradual development of these that becomes a powerful medicinal measure. Religious faith is another psychic influence which, when founded on reason, is very helpful. Often it is so complicated with emotional states and excitement that it is transient. The minds and senses of spirit and drug takers are not often receptive to psychic facts concerning the future life. Such facts may secure a momentary impression, but unless sustained by continuous appeals and increasing organic vigor are usually transient. The higher consciousness of right and wrong and power of appreciating ethical truth is depressed and enfeebled. While the patient is credulous, it is along lower levels and towards physical ideals. One central fact should be the controlling power, namely: to train and develop the mind and body out of the present condition and toward an ideal of new vigor and strength. This combination is most perfectly secured in small hospitals and homes where the patient can be seen and studied, and every condition of surrounding regulated. The power of contagion in which one person dominates the other, forcing his conclusions upon him, often to his injury, can be controlled in small hospitals. The paretic egotist who defends the use of spirits, and urges other extreme theories, which are accepted as truths by weaker minds, is a psychic degenerate that is positively dangerous to others. Such persons in the community are infectious and need psychical treatment. In hospitals they should be isolated and made subjects of profound impressions. The depressive confusional conditions of many spirit neurotics are often treated successfully by physical and mental occupation, applied up to the point of fatigue. In one instance a number of persons under treatment were sent daily a long distance to take the temperature of the water of a lake and compare it with that of the water in a cave. In another, a patient was sent to a library to find some historic records. Both of these persons made good recoveries, largely depending on the psychic treatment of the mind. In a small institution this personal treatment can

be concentrated, in stimulating and dominating the psychic impulses. Physical culture can be developed here to a high degree, and the various morbid impulses can be suppressed and overcome by the development of other combating forces. The theory of the subliminal, or the inner consciousness, to obtain mastery over the degenerative functional impulses, is most suggestive and the application of which seems to be unlimited. It is clear that physical training and the removal of the toxic causes and the improvement of nutrition opens a larger scope for the test of this theory, which is practically the influence of mind over matter. We are all aware of the potent power of this psychic force, seen in every great cult that is growing in this country. Why cannot this power be concentrated in our private work in small hospitals and made to accomplish results in overcoming disease? Already we are face to face with the fact that what is termed suggestion, skillfully applied and persistently pressed along rational lines, is a medicinal power of tremendous possibilities. We are already aware that the great armies of spirit and drug neurotics in every section of the country should be halted, restored and saved from the jail and almshouse. With a wise application of psychic and physical remedies this can be done. The evidence is accumulating and almost every physician can refer to instances of restoration, ascribed to means that are utterly inadequate. When examined scientifically, it is the psychic realm and its mysterious laws which have produced this result, and we stand about unconscious and ignorant of its mighty presence. The toxic neurotic with his damaged pain centers and faulty resisting powers, low vitality, needs something more than physical treatment. He needs psychic remedies to turn his feeble mentality into new plains of thought. The new forces must be brought into new activity and new roads of escape must be pointed out. The small hospital and the family physician are the pioneers to develop and bring into practical science this realm of practice now unoccupied at our door.

IS GENIUS A SPORT, A NEUROSIS OR A CHILD POTENTIALITY DEVELOPED?*

BY JAMES G. KIERNAN,

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IT very vividly illustrates the mentality produced by sexual twists that Ruskin should write in 1869, "Swift is very like me." And, as Harrison remarks in that most strange bit of autobiography¹ which ends "that in my enforced and accidental temper and thoughts of things and people," Ruskin has "sympathy with Dean Swift" of all people. Strange parallel, strange coincidence, remarks Harrison.² "The most drab colored with the most purple of all great masters of English; the most cynical with the most idealist makers of Utopia; the most foul with the most prudish of writers; the keenest politician with the most unpractical of dreamers; the bitterest hater with the most loving sentimentalists and yet analogies in mind and circumstances—the two so lonely in spirit, so like in their genius for sarcasm, so boiling with indignation for the people's wrong, so brave, so defiant; each gifted in burning speech; both such Platonic lovers, yet petted by good women;

*Continued from the August, 1912, *Alienist and Neurologist*.

1. *Sesame and Lillies* Preface.
2. *Life of Ruskin*.

both once so much sought, often so hotly reviled; both ending in such a wreck in something like despair."

Swift, Carlyle and Ruskin had sexual impotence in common. In all there were also autotoxic tendencies, which in Swift were complicated by Meniere's disease. All were prurient but in Carlyle and Ruskin this took that prudish direction which so often means the deepest pruriency.

In Swift the preadolescent skatologic tendencies were most evident. Ruskin and Swift were Anglican evangelical but disliked equally with Carlyle Puritan individualism. Ruskin's attitude to this and his attitude to great modern culture which was the outcome of it and the individualism of the renaissance appears in the Index Expurgatorius drawn up in his "King's Treasuries." In this index appear all the non-Christian moralists, all theology (except Bunyan and Jeremy Taylor) Lucretius, the Nibelungenlied, Morte d'Arthur, Sophocles, Euripides, all modern historians, all philosophers, Thackeray, George Eliot, Emerson, Kingsley, Macaulay, Hume and Swift.

Art to Ruskin after all was said and done had a *utile cum dulce* teleologic aspect. He attempts to demonstrate that art is a pseudo-ethical priesthood. Ruskin, like Carlyle, had a pietistic bourgeois attitude toward art and science.

"Carlyle's interest," Garnett³ remarks, "in science as in poetry, was solely ethical. If he could connect a scientific discovery or hypothesis with what he deemed a truth in religion or morals, he was delighted; if, like the Darwinian theory, it came in company with an unwelcome conclusion he was disgusted, but he admits his indifference to even such a hero of research as Faraday, if his discoveries had no visible influence on human conduct or welfare. It was the same with art: cathedral architecture impressed him as the incarnation of religious feeling, but his taste in painting was that of any Annandale peasant." This opinion as to the origin of Carlyle deficiencies from his inborn constitution, environment and race characteristics (as I showed⁴ over a decade ago) was exceedingly probable. The like egocentric results from sexual twists appear in Rousseau.

3. Great writers: Carlyle.

4. Alienist and Neurologist, 1895.

Rousseau early exhibited the mentality of the bourgeois revolutionist who desires to level to his own place, but no further. In this particular the political economy and sociology of Rousseau bear a very close resemblance to those of the modern plutocracy, shop-keeping population and rural middle class. While Rousseau shows undeniable traces of the influence of Locke and Hobbes, he continually repudiates his indebtedness. The French revolutionists were much deeper students of the literature of the English Puritan revolutionists of 1640 than is usually suspected. Just after the deposition of Louis XVI, there appeared a French translation of the trial of Charles I. It was unfortunate, however, that Rousseau accepted the conception of state domination from the Roman law, rather than the doctrine of individual right, which is a dominant part of the English common law. His "Social Contract" is essentially the conception of Hobbes' *Leviathan*. While Rousseau, in his *Social Contract*, is at the outset an evolutionist, he becomes a revolutionist, who has no definite knowledge of the rights of the individual.

The main positions of Rousseau are, according to Morley,⁵ these: In the state of nature each man lived in entire isolation, and therefore physical inequality was as if it did not exist. After many centuries, accident, in the shape of difference of climate and external natural conditions, enforcing for the sake of subsistence some degree of joint labor, led to an increase of communication among men, to slight development of the reasoning and reflective faculties, and to a rude and simple sense of mutual obligation as a means of greater comfort in the long run. The first state was good and pure, but the second state was truly perfect. It was destroyed by a fresh succession of chances such as the discovery of the arts of metal working and tillage, which led first to the institution of property and second to the prominence of the natural or physical inequalities, which now begin to tell with deadly effectiveness. These inequalities gradually become summed up in the great distinction between rich and poor; and this distinction was finally embodied in the constitution of a civil society, expressly

5. John Morley: *Rousseau*.

adapted to consecrate the usurpation of the rich and to make the inequality of condition between them and the poor eternal.

The constitution of the United States and the Declaration of Independence are said by pietists and plutocratic sycophants to owe their origin to the Social Contract of Rousseau. This assertion betrays a curious ignorance of the relationships between the American doctrines and those of the Whigs of England, to whom Rousseau owed his inspiration. Locke, remarks Graham,⁶ "seems to have influenced most of all the Genevese philosopher. The calm views of the Treatise on Government find their bold, if not logical conclusions, in the impassioned reasoning of the Social Contract. His opinion that there exists a pact between the prince and the people, the breach of which engagement on the part of the prince justifies rebellion, became the orthodox Whig creed, and was formally accepted by Parliament when it declared that James II had tried to subvert the constitution by breaking the original contract. The doctrine of passive obedience in England was shaken by the Revolution which deposed a king. The doctrine of 'divine right' was shaken by the Hanoverian succession, which changed a dynasty, while the staunch supporters of non-resistance were only found amongst High Churchmen like Bishops Kettlewell and Kenn, who called it devoutly the doctrine of the Cross. But in France no events had yet occurred to destroy the old faith; the same dynasty continued associated with all that was greatest in the country's history and the faults and vices of the kings no more affected it in the minds of many, than the vices of the popes affected the infallibility of the Papacy. The Gallican Church was keenly monarchical, and the clergy were still in harmony with the opinion of Bossuet, who preached that kings were sacred things, and that even if the rulers were as wolves, the Christians should be as sheep. It remained for Rousseau to change the sedate arguments of publicists into a revolutionary explosive and to apply doctrines which had been innocuous in England to deadly effect in France. It is remarkable that the opinions which proved most destructive across the Channel were imported from this country, where they were harmless. The free-thinking of Chubb,

6. *Life of Rousseau.*

Toland and Tindall, which only met with hot argument from the clergy and cool indifference from the laity, when adopted by men like Voltaire, helped to sap the faith of society and the institutions of the French people. The political opinions of Locke and Sydney, which had only served quietly to depose a king when adopted by men like Rousseau, went to overturn ruthlessly the whole constitution of France."

As has been pointed out by Macaulay, however, revolutions in the English speaking countries are preservative, rather than destructive, since despite all retrogressive influences the revolution has proceeded along the lines of the English common law, recognizing that the rights of one individual extend as far as the right of another begins, and no further. Had Charles I and James II succeeded, the revolutions in England would have been as radical as those of France. As already pointed out, however, Rousseau fell in with the general current of thought sweeping over France. Here, as elsewhere, his genius was a resultant rather than a determining force.

The germ of the "Social Contract" was an essay written in response to the prize topic offered in 1749, by the Academy of Dijon: Has the progress of the arts and sciences helped to corrupt or purify morals? Rousseau's description of how this topic affected him illustrates that bourgeois type of mind which aligns the bourgeois with the atavistic minds found in the criminal lunatic and savage. In all these, the senile tendency to believe in human degeneracy is marked. "All at once," remarks Rousseau, "I saw another world and became another man. In an instant I felt my head dazzled by a thousand lights, crowds of new ideas presented themselves at once with a force and confusion which threw me into inexpressible agitation. I felt my head seized with a giddiness like intoxication, a violent palpitation oppressed me. Unable to breathe walking, I lay down under one of the trees in the avenue and passed half an hour in such agitation that on rising I saw all the front of my waistcoat moist with my tears, which I had unconsciously shed upon it." The excitement thus produced by a trite topic, fitting in with the ideas of Adamic innocence which Rousseau had imbibed from both his Calvinistic and his Catholic training, illustrates how great was the emotional instability existent in

him at an early period. The controversy between Rousseau and Diderot, as to which originated Rousseau's method of treating the topic, seems futile when this is remembered. It is very probable, however, that Diderot's suggestion of a paradox gave Rousseau's style more verve than it would originally have had. Rousseau, however, was guided by the same bourgeois trend of mind in his treatment of the topic, as he was in so many other directions. Moreover, as his *Confessions* show, he entertained a spite against the Paris Academy of Science for its treatment of his essay on music.

In an egocentric mind like that of Rousseau, this would tend to depreciate science and to show that it was degenerating. Like all sexual twists, Rousseau declined to see the evil in the past in order to enjoy from a fancied contrast, the peculiar coarseness of the present. Graham supposes with considerable plausibility that both stories as to the origin of the essay were one-sided, and that both friends were of opinion that to argue the paradoxical theory was the best course—Rousseau from sentiment, Diderot from ingenuity. Rousseau here found an outlet for his pent up social animosities; an obscure writer, he could speak bitterly of those whose names were on every lip; an unscientific man, he could scorn those whose systems of philosophy were filling the world with interest and whose theories gave occasion for endless debate; poor, he scoffed at wealth and its luxury; unpolished, he mocked at the insincerity and affection of fashionable life; inexpert and slow of wit, he rebuked the pertness and nimble talk of refined society. He has measured the literary value of his essay when he says that, though full of heat and force, it is devoid of logic and order, and that of all writings, it is the feeblest in reason and poorest in harmony, "for the art of writing is not learnt at once." Indeed, the side it adopts is that which a clever youth in a debating society would take to show his ingenuity, and then vote against in order to show his good sense. But what invests the *Discourse* with interest is the fact that it contains the germ of the doctrine of all his after writings, and reveals the whole character of the man with all his bourgeois violence against hereditary customs, social distinctions and restraints. The essay illustrates how much the semi-men-

dacious platitude sways the bourgeois mind, even in an revolutionary.

Rousseau's pseudocynical gird at science in his *Discourse* is born of that bourgeois primitive necessity for belief in the absolute—to which gradual evolution is peculiarly repugnant. Thereby the bourgeois readily becomes a prey to the quack in literature, science and art because the quack combines the occult and the sterile platitude. Rousseau, Graham remarks, sees only the mean origin of philosophy. He does not see with Shakespere

That there is some soul of goodness in all things evil,
Would men observingly distill it out,

nor with Shelley that

Thought by thought is piled
Till some great truth is loosened and the nations echo round,

nor with Emerson that

Evil is good in the making.

The "Discourse" consists essentially of the cant of the golden-age mythologist, who having exhausted all sensations by explosive indulgences, cries, like Solomon, from the exhaustion of satiety that all is vanity. Swift's "Voyage to Laputa," and Samuel Butler's "Elephant in the Moon" played previously the same note decrying science that moved Rousseau in the "Discourse."

Swift's peculiar relations to Stella (Miss Temple) and Vanessa indicate, according to Wilde, that, like Ruskin, Swift, "was constitutionally incapable of any passion stronger than friendship." Swift's skatologic tendencies, while akin to that of the era of Charles II., displayed that phase of primitive mentality which finds in skatologic obscenity wit and humor. This type of mentality is a frequent source of skatology, especially of the "religious business" type, to whom religion is merely a fetich or mascot. The pruriently prudish medical man who contemns physiopsychologic discussions of sex problems but is given to post-prandial flashes of skatologic obscenity is of this type.

Something like passion appears in Swift's relations to Miss Vanhomrigh (Vanessa), but his relations to Stella re-

sembled those Ruskin attempted to establish with his wife, (married to Millais), later still with the morbid Rose LaTouche. Ruskin suffered from a congenital sexual defect which under canon, not to speak of common law, invalidated marriage. In the papal court of the Rota such marriages were frequently declared null and void, as the medico-legal work of Zacchias shows.

The same twist produces Ruskin's distortion of facts into special pleading. The "Stones of Venice" taught, remarks Harrison, "the laws of constructive art and the dependence of all human work or edifice on the happy life of the workman." "To extend this law to all forms of art and to give it the absolute character that Ruskin attempted involves us," remarks Harrison, "in endless paradox and mischievous absurdities." As pointed out as to "*Fors Clavigera*," the very pictures of Perugino, Titian and Tintoretto were painted in societies corrupt to the core; one side of Greek sculpture was actually inspired by a detestable type of vice and the triumph of music dates from times of curious affections and rottenness. It never seems to have occurred to Ruskin that the very works of imagination he treats as almost divine were exactly contemporary with others he treats as emanations from hell; that much of the purest art was produced in time of foulest crime; that some of the most devout and pious of nations have expressed their artistic longings in terms of vulgar common-place. While this criticism is tinged like Ruskin with philistinism, still it shows that judged, even from a like viewpoint, Ruskin was simply a special pleader. "Architecture" remarks Frederick Harrison, "is far the most social and national of the arts and more than any other art is affected by the moral tone dominant in the society that employs it and by the national ideals in vogue; and that for the simple reason that all great buildings are raised by the public for the use of the public and not by individual artists for the enjoyment of a single owner. But even in architecture these sweeping generalizations are wont to burst like bubbles." "Among the noblest buildings ever raised by man and those which have exerted the most potent influence on after ages must be counted," remarks Harrison, "the Parthenon, the Pantheon at Rome,

St. Sophia's Church at Constantinople and St. Pauls in London. The Parthenon was nearly contemporary with the comedies of Aristophanes and the Sophists of Athens, not with Marathon and Aeschylus. The Pantheon now known to be of the age of Hadrian was contemporary with the satires of Juvenal and the Epigrams of Martial. St. Sophia was built by the husband of the Empress Theodora. St. Paul's was built in the era of Charles II and James II. Were all these sublime masterpieces of the building art—Parthenon, Pantheon, St. Sophia's and St. Paul's—the production of a faithful and virtuous people? It is curious that they synchronize with some of the most scathing satires upon personal and social corruption that survive in Greek, Latin, Byzantine and English literature."

(TO BE CONTINUED.)

DERMO-DORSO-MANUCARPAL REFLEX.

A Cursory Preliminary Note.

By C. H. HUGHES, M. D.

St. Louis.

THE geroderma of the extremely and prematurely aged due to cutaneous dystrophy displays itself in other states of geromorphism as well as in ordinary geroderma and geromarasmus as we see it in old age and premature senility.

This peculiar dystrophy may be seen, if sought for, in other states than in time worn exhausted conditions of the skin, innervation when diminished or cutaneous metabolism have prematurely set in.

Adequate and prognostic signs of significance and value may be found in what I here choose to term the dermo-dorso-manucarpal reflex sign or symptom, elicited by pinching up a fold of the skin of the dorsum of the hand or carpal region between the thumb and forefinger and noticing the time and manner of the return to normal position of the pinched up skin over the hand, fingers and wrist. This shows the degree of skin reflex elasticity or lack thereof and is quite as important for diagnostic or prognostic estimate as the virile reflex or variations or absence thereof, as I have heretofore described the latter and like the latter it may have more or less medico-legal significance in certain obvious cases.

The skin, the largest excreting surface of the body and neurally well supplied, is a peculiarly sympathetic organ to the rest of the economy, in close relation to the entire system, with most intimate nervous connections. Through its vasomotor central relations it blanches with fear, pales or flushes or congests in response to anger and other emotions of the mind. Its papillae erect quivers in the characteristic cutis anserina under

shock—psychical or physical. Its capillaries also dilate under a nerve center disturbing toxic or microbic fever and contract under chill. Its closed or open capillaries may suddenly chill or become overheated in violent attack of passion or from malarial toxemia. It responds in tone and action to upward or downward metabolic impress of the inner-viscera and vital nerve centers. Through its neural connections its functions are sensory and motor or sensori motor.

We are accustomed, therefore, to consider it in our estimate generally of many morbid states and this function of the skin's special elastic reflex responsiveness to pinching, though we use it for testing for the persistence of normal sensibility in suspected or impending or existing moribund states, as in anaesthesia or other narcoses, as a sign of persisting or vanished sensation the profession has not made such use of this valuable dermal reflex power at these points as we might for our clinical enlightenment since it is markedly present in the healthy and absent or impaired in many phases of illness. So I here call attention to it that it may serve others, as it has served me through many years, valuably, at the bedside and in the office.

It helps to show conditions of central anabolism or catabolism in conditions of nerve center tonicity or exhaustion, as in profound and far advanced neuratrophia and associated neurasthenia, in states of impending dissolution, in moribund states, as well as in conditions of immediate presenility and in the extremely aged. It is a good sign or a bad sign as it differently reveals itself in normal elastic tonicity or abnormal inelastic atony.

We add this quick skin sign, in our examinations to the other prompt signs of pupil, tongue, temperature, auscultation, percussion, sensational and other skin and deep reflexes and the blood color card tests for prompt diagnosis and in lieu of or in addition to the more tardy microscopic and the chemical reaction tests.

The reaction time of this dorsal hand reflex sign varies from the instantaneous normal return response of health as it shows in normal childhood, youth and early maturity to the

indefinite and prolonged delay of extremely enfeebled and health broken advanced age, or premature senility.

In the aged even the morning reaction time after a prolonged restful recuperating exhaustion-compensating sleep and satisfactory restful previous day nutrition and an hour or so preceding satisfactory breakfast, will show more briefly than after a day or so of inadequate and unsatisfactory innutrition, worry and weariness, and in most persons the sign shows more tonically in the early than in the after part of a nerve wearing weary day.

Goose flesh and shuddering under sudden cold or violent emotional shock are reflex phenomena though not usually so described. In fact there are many more reflexes yet to be recorded in physiologic, pathologic and diagnostic literature.

A human being has been called a bundle of nerves. He is an aggregation of reflexes.

This reflex in connection with the shrivelled skin generally of normal advanced or abnormal and premature age and the diminished and absent virile reflex and arcus senilis, etc., will help us much in solving the existence or non-existence of impotency in an obviously significant medico-legal question before the courts concerning senile impotency.

I have derived much light and satisfaction in practice from this skin reflex sign and my interpretation thereof in many cases. To best elicit this reflex the hand should be extended. When the hand is flexed and the fingers clasped inward as in making the "clenched fist" the responsiveness is increased by "clenched fist" reinforcement. Examination of the skin anywhere, except the underlying adipose tissue has too great fat deposit or the subcutaneous areolaris distended by fluid or air, aids us. Subcutaneous and external skin distention must be taken into consideration in seeking to bring out this skin reflex sign anywhere we may seek it, which is commonly called skin elasticity and this elastic response is diminished or increased according to normal or abnormal innervation or presence or absence of mechanical obstruction to the test. There is a vast field for physiologic and diagnostic study here, in which we have not opportunity to further enter now.

SELECTIONS.

PSYCHIATRY.

WHAT IS GENIUS? Anent Dr. Kiernan's article in our May number, "Is Genius a Sport, etc." Dr. B. F. Turner writes in the Memphis Medical Monthly as follows, which we partly abstract:

What is *Genius*? And does it, like a sport in the realm of botany, assert itself as an eccentric and aberrant divergence from the type of the family from which it springs? The word genius is variously used to express different meanings. In such individuals, whom the world has characterized as geniuses, as Leonardo di Vinci, Napoleon, Goethe, Shakespeare, and Helmholtz, we see such commanding personalities, such breadth of mental horizon, such versatility of achievement, as make them stand out among men as giant oaks in jungles of bush, briar and scrub. While again, amongst so-called geniuses are to be found Michael Angelo, Voltaire, Frederick the Great, Dean Swift, Oliver Goldsmith, Robert Burns, Paganini, Whistler and Edgar Allan Poe whose achievements, however brilliant in some one direction, assert themselves, like beautiful flowers from a bed of muck, or worse, tarnished and minimized in their influence by attributes of character suggesting the co-existence in the same individual of mediocrity or even sometimes of degeneracy.

What more natural than that the prospective parent should seek to endow his progeny with such attributes of character as would make for superiority in the individual? But the wonder of it is that up to the present time so little that is practical has ever been developed. We experiment with the lower animals or with plants. We rear strong or fast horses; dogs that hunt well by scent and others by sight; seedless fruits and orchids and roses of selected colors. But where has been the statesman, the writer, the painter, the musician or the

warrior whose achievements have been the result of prenatal selection? To the contrary, how often is it observed that the son of the great philosopher is a fool; of the man of pure life and high ideals, a rascal; of the ambitious, inert; of the energetic, indolent. Fortunately for the world and for the human race, it works just as often the other way, and sometimes from the most unpromising, yes, even vicious lineage, springs the individual who possesses all that makes for the highest type of success and usefulness.

Far down, doubtless, in the mysterious depths of embryology and heredity, lie the springs from which issue the influences which determine these final products. Only they are too deep for us to reach and voluntarily utilize, enmeshed as we are in a social fabric ages old and spun with such infinite disregard of pattern. We look upon the products of our efforts in the direction of prenatal selection in the form of horses, dogs, fruits and flowers, and deduce therefrom certain conclusions regarding the production of character by analogous processes. But all in vain. The one has to do with the comparatively gross processes of cellular activity and development. The other with processes psychological—ininitely mysterious, always elusive. Desirable attributes of character in the parents supplement each other, and the offspring possesses a reduplication of both. Or equally desirable attributes oppose each other and both are vitiated. Or finally, either desirable or undesirable attributes may either supplement or balance each other in such wise that the ultimate product in the offspring is degeneracy. Infinite mystery. And the human race is today far from the adoption of any process whereby the character or usefulness or efficiency of the individual is determined by prenatal selection. A moonlight night; the fragrance of an unseen rose near by; a strain of ravishing music; the inadvertent touch of the hand, and amidst the intoxication of the senses a psychological process is set in motion which eventuates in the landing of a genius into the unknown—or a degenerate, which?

In this same *Memphis Medical Monthly* for August, Dr. Jessie J. Cullings gives the third of a valuable series on Simple Clinical Diagnosis (Cytological) for the General Practitioner.

THE PSYCHIC DEPARTMENT OF THE BODY is far the most important portion, and its morphology and physiology are as much matters of heredity, in the transitions of phylal habits, as are those of the sub-psychic; with possibly more variations attached to them. In the transitions through the generations, the physic department is seen to vary greatly. It varies in its abilities,—in its receiving sense organs, in its central cerebrum, and in its large bulk of voluntary muscles.—*Sayings of Searcy.*

MENTAL PATIENTS IN WORKHOUSE WARDS.—The Hospital(London) records that one of the Commissioners in Lunacy, Mr. Trevor, has reported the presence of seventeen mentally afflicted persons in the workhouse and the infirmary. The gravaman of his report lies in the statement that he found the majority of these patients "all," we are told, "of the troublesome class," in the general wards of the workhouse. Among those not permanently detained he observed "a pronounced melancholic" and "a morose looking person," who, in a fit of temper, had attempted to strangle an aged inmate. The Commissioner's comment was that it is unfair to expect the small staff of a workhouse to be responsible for patients who should at once be sent to a mental hospital. Similar errors of management exist in the U. S. There are too many insane out of their proper places in the U. S.

PSYCHO EUGENICS.

HEALTH MARRIAGES COMING.—The demand for health marriages grows. Following the lead of the Rev. Charles M. Sheldon, author and lecturer, who announced that he would never marry another couple unless physicians' statements as to good health were produced with the license, the Probate Judges' State Association has prepared a bill for submission to the Legislature of Kansas embodying this feature. The federated churches of Cleveland, O., have recommended that the same be applied by all ministers in that city and have also

taken steps to have a State law adopted embodying these features. Dean Sumner, of St. Paul's Cathedral, Chicago, was the pioneer in this method of racial betterment, and wherever his famous ruling has been investigated it has been approved.

Alienists, neurologists and all other physicians note with approbation and pleasure this public awakening for a better brained and brawned people, whose best support and building is at the matrimonial altar, the fountain source of a people great or weak.

NEUROANATOMY.

NERVES OF THE THYROID.—Darmon A. Rhinehart, a graduate of Indiana University and a member of the senior class of the medical school, has written very interestingly concerning the nerves of the thyroid and para-thyroid bodies. The illustrations are from drawings made by himself. The article appeared in the *American Journal of Anatomy* and is the result of laboratorial observations and work. The beautiful drawings show very plainly the relation of the nerve endings to the gland cells and the elaborate perivascular plexus. One of the figures includes a section of the parathyroid, a small artery accompanied by nerves entering the parathyroid from the thyroid, the supporting connective tissue and nerves in this connective tissue as well as nerve endings.

Dr. Rhinehart's conclusions are:

1. The nerves of the thyroid are entirely non-medullated and reach it from the cervical sympathetic ganglia by following the thyroid arteries.
2. In the thyroid there are formed elaborate nervous plexuses around all the blood vessels and all the follicles, the nerves forming the latter coming from the plexuses surrounding the smaller arteries.
3. The perivascular nerves end in the walls of the blood vessels and furnish the vaso-motor supply, while those of the perifollicular plexuses end on the bases of the epithelial cells and probably carry impulses influencing secretion.
4. All the nerves are varicosed but do not anastomose.

5. The nerves of the parathyroid come from the same set that supplies the thyroid and pass into it along with the branches from the thyroid arteries. These nerves probably all end in the vessel walls and are vaso-motor in function.

6. No ganglion cells are found in either the thyroid or parathyroid bodies—Dr. Samuel E. Earp, editorial in *Indianapolis Medical Journal*.

PSYCHO-PATHOLOGY.

PSYCHOGENIC DISORDERS IN CHILDREN. By Tom A. Williams, M.B., C.M., Edin., Washington, D. C. Corresponding Member Society of Neurol. and Psychol. of Paris, etc.

To treat a neurotic child by rest or other physical means is a mere rule of thumb. The frequent failures which follow such an unscientific method are prevented by ascertaining and then rectifying *unwise psychological factors* in the etiology. The cases reported show the utility of proper psychopathological training in that they were all rapidly cured after months of unsuccess by the empirical methods employed before they were seen by the author. For instance, a so-called chorea was found, by analysis, to be in reality a tic due to scrupulous ideas. The cause of an insomnia and nervousness after study was discovered to be induced by the apprehensiveness of the parents. The removal of unwise solicitude and over conscientiousness has kept the child well for 18 months.

A case showing tearfulness and distress due to unwise repressions was cured in a few days after analysis had revealed the source of these. A case, in an older child, of developed obsessions and mental manias was traced to a jealousy complex. Psychomotor exercises along with the realization of the import of his own state produced recovery in a few months. Likewise simple explanation and psychomotor exercises served for the removal of pseudo-hallucinations and hysterical phobia in an 8-year-old boy.

The discussion of the mechanism of the cases points to a mechanism by induction by unwise parental management rather than through the direct transference mechanism pos-

tulated by the followers of Freud from their analysis of adults.
--*Author's Abstract.*

PSYCHOTHERAPY.

ANTICANTEEN.—On Monday afternoon, March 25th, a meeting was held, under the auspices of the W. C. T. U., in one of the ballrooms of the Hotel Astor, to discuss the objections to the restoration of the sale of beer and wine in the army post exchange or canteen. The speakers were military men who have seen both sides of the question—General Miles and Colonel Maus, Chief Surgeon and Medical Inspector of the Central Division, U. S. Army. General Miles spoke of the desertions of the men in the anti-canteen period, and showed from the army reports that desertions have been gradually lessening, 1911 showing the smallest percentage of desertions since the Civil War. He said beer is as injurious to soldiers as regards efficiency as it is to men in other lines of life.

Colonel Maus said that the increase in venereal diseases reported can be accounted for in two ways: First, there was not compulsory inspection until within the last decade; and, second, the personnel of the army has changed. The army now is made up of younger men who are naturally more passionate than the mature men who formerly served as soldiers. The strongest point made by Colonel Maus was that the young soldiers now in the army do not remain in the service more than a few years, and they know that if they learn to drink in the army it will hinder them from obtaining good positions in the business world when they return to civil life. So, many of them, he said, do not want the temptations of the beer canteen. He said he had permission from the Secretary of War to be present, that he had come 1000 miles to make this address, and he would gladly go ten times the distance to save the soldier boys from the army saloon.

We place this extract from the New York Medical Journal in our psychotherapy department because it is the brains of alcoholics that suffer most, though the harm of inebriety is all

pervading, abnormally harming even habitual moderate drunkards (so called). It assaults and damages all the viscera.

Alcohol as a social drink, whether in form of wine or beer or the more fiery brandy, rum or whisky, like Barrabus of old, is a robber and deserves social crucifixion. It robs the tissues of their life fluids, absorbing their water of life, making them dry as the drunkard's throat in the morning. It reddens the brain, blossoms the face and bloats the body through paralysis of the blood vessels.

The wise physician may at times use to advantage the blood vessel paralysing power of alcoholics but the social drinker never. Its only tolerable place is in the hospital and armamentarium of the physician and then never as a beverage. It will hurt any army as it harms civilians.

PSYCHIATRY AND PSYCHO-EUGENICS.

BUILDING SOUND MANHOOD.—We have founded great institutions for investigation and research to determine, if possible, how we can be saved from the great white plague, from the hookworm and from numerous other ills to which human flesh is heir. We have established hospitals and built pavilions on the mountainpeaks that the sick and the feeble might be made whole again. The lofty human thought that suggested, and the helping hands that have furnished the means to bring about these experimentations are beyond all praise, but would it not be well to carefully examine the first great material cause—look to the earth, from which all food must come, and see whether or not it contains a well-balanced ration of all the essential elements necessary to build a man? If these elements are not in the soil they cannot be imparted to the plant. If they are not in the plant they cannot be imparted to the man. If the two together fail to have them in proper proportion we cannot grow a race of men that will start life's fitful fight with vigorous physical constitutions and the natural mental strength to make possible useful careers. Physically speaking, as we are fed, so are we. As a rule, the quality and intrinsic value of the food crop decreases

with a reduction of the yield. As food grows scarcer and higher priced, with an increase of population and a decrease of production, the poor will be forced to buy the cheaper foods, and possibly before we, as a Nation, realize the fact, multitudes of our people will unwittingly eat bread that is not life-giving bread, and that will presently bring about an anemic condition too distressing to be calmly contemplated. The loss of efficiency from lack of nutriment in the food that they are forced to eat will be beyond all estimate.

NO THOUGHT FOR TOMORROW.

The ancients robbed the earth slowly with poor and primitive implements. We rob it rapidly with the most improved agricultural machinery, with horse power, steam power, electricity and dynamite. Are we following in the footsteps of these older Nations, simply robbing more rapidly than they did?—*From President Henry Exal's address at Texas Industrial Congress, March 20, 1912.*

CEREBROTHERAPY.

THE THERAPY AND PERIL OF MAL-DE-MER.—Dr. Joseph Byrne, whose valuable studies of the semicircular canals and their relation to the cerebro-spinal and sympathetic nervous systems and to the circulation, respiration, digestion, etc., fastens, as others have done before him, this trouble of "those who go down to the sea in ships" on the labyrinth.

The author advises against sea-voyages to suffering individuals regardless of conditions of circulation and digestion and denounces the indiscriminate advice to travel, which is so often given to patients with symptoms of mental depression. He refers to the many cases of suicide occurring at sea resulting from "psychic depression incidental to seasickness itself." He says that "a serious responsibility rests with the physician who recommends sea-voyages in conditions in which the 'reserve-margin' of any of the organs is encroached on by disease or faulty habits of living." The lonely individual suffering inner torments, as the result of repeated labyrinthine irritation, wandering about in mental agony, not knowing what

is the matter with him, nor how to orient himself properly in the whirl of his disordered imaginings, left severely alone, with the result that relief from mental distress is sought in self-destruction."

NEUROTHERAPY.

NORMAL SERUM.—Tounecek devised a serum to be used subcutaneously with great benefit in arteriosclerosis as follows:

Sodium chloride.....	10 grains
Sodium sulphate.....	1 grains
Calcium phosphate.....	0.75 grains
Magnesium phosphate.....	0.75 grains
Sodium carbonate.....	0.40 grains
Sodium phosphate.....	0.30 grains

One gram of this dissolved in 15 c. cm. of sterile distilled water. Treatment is begun by hypodermic injections in the region of the buttock of 2 c.c. of the solution every other day, being increased in amount 1 c.c. each injection until the dose of 8 c.c. is reached. The mixture has also been given per rectum or by the mouth.—*Texas Medical News*.

NICOTIN IN TOBACCO.—Regarding the proportion of nicotin in various brands of tobacco, and also the percentage of nicotin contained in the smoke of cigarettes, pipes, cigars, etc., by a new method of analysis, the *London Lancet* finds that Havana cigars contain only .64% nicotin, while British cigars contain 1.24%. Virginian and Turkish cigarettes contain from 1.38 to 1.60% nicotin, while Caporal contains 2.60%, and average pipe mixtures 2.85%. The percentage of the nicotin-content of tobacco that goes into the smoke, and is drawn into the mouth, is as follows:

"Cigarettes: Virginian 3.75 to 8.50%; Turkish 37%; Caporal 84%; pipe-mixtures, smoked in cigarettes, 79%; pipes 77 to 92%; cigars 31 to 83%."

CASES ILLUSTRATING RATIONAL TREATMENT OF HYSTERIA WITHOUT MINUTE PSYCHO-ANALYSIS.—(*Medical Annals*, Jan.

1912, *Post Graduate*, July) by Tom A. Williams, M.B., C.M., Edin., Washington, D. C.

Hysteria is defined from its genesis, that is by suggestion. Ten cases are described. They are divided into three types.

A. Where the causative suggestion is found to originate in some organic disease. This is the commonest type and the most practically important, because the hysteria often creates far more functional disability than does the disease which suggests it.

B. Cases in which the causative suggestion was not discovered because of insufficient psychoanalysis; but in which the secondary effects of the undiscovered suggestion which had become a habit were removed by psychomotor discipline, and the tendency to further hurtful suggestions was minimized by psycho-therapeutic measures, consisting of the readjustment of the patient's point of view. These cases are not uncommon in practice, are rarely cured either by mediate or immediate suggestion, and requires a knowledge of psycho-therapeutic technique for their successful treatment.

C. Cases of hysterizability whether innate, from family predisposition, or acquired, usually in childhood on account of improper upbringing and lack of education in self-control and against impulsivity and inattention. These cases are in want of pedagogical as well as medical assistance; but as those who usually come to the doctor do so because their ailment is supposed to be physical, the physician must become pedagogue towards these patients, at least until the false ideas as to their physical states which have risen from suggestion have been transformed.

Case 1. The first example complicated a haematomyelia of two years standing; but a single interview enabled the man, a machinist, to go to work in spite of the organic defects.

Case 2. Illustrates the failure of suggestion treatment to prevent relapses in a case of hysterical neuralgia.

Case 3. The hysterical complication required separation from the results of an osteomyelitis, the effects of an injury, and the dream-like state produced by chronic alcoholism. This led to successful therapeutics.

Case 4. Hysterical appendicitis of three months, cured by her own doctor in two hours.

Case 5. Coccygodynia cured by her own doctor in four months after failure of numerous surgical operations.

Case 6. A habit spasm of an ilio psoas originating in a chronic appendicitis; cured by ten days psychomotor discipline, subsequent to an operation which had not improved it.

Case 7. Intense hyperaesthesia of the patellar regions; cured in a week by psychomotor discipline, after several months failure of powerful suggestions of various doctors.

Case 8. Hysterical tic after like failures cured in two interviews by psycho-motor discipline.

Case 9. An aggravation of hysterical hypochondriasis of long standing; removed in a few weeks by rational persuasion.

Case 10. Phobia in a boy of eight, "cured" by discipline guided by the data of a rapid psychoanalysis.

In treatment, are discarded mystical impression, suggestive and emotional appeal, which are the main reliance of illicit practitioners and too many doctors; so that, as hysteria is the product of an idea, enlightenment by rational persuasion concerning it combined with motor, sensory and psychic re-education is the method used to reconstruct the patient's attitude. The therapist must think in terms of dynamogenesis and avoid arbitrary empiricisms.

Finally, clear diagnosis of the mechanism to be overcome is essential; for the physician must not only aim at his object, normality; but must envisage each step of the process required. Nowhere is greater refinement essential.—*Author's Abstract.*

CALCIUM.—Tasker Howard, *New York Medical Journal*. It has been known for over twenty years that calcium is necessary for the formation of fibrin ferment, which brings about the process of coagulation of the blood or of exudates. Calcium is necessary also for the action of certain other ferments, notably labferment or rennin. Hamburger has shown that small doses of calcium stimulate the phagocytic activity of the leucocytes, and plays an important part in fat metabolism. Brilliant results in calcium therapy are in the tetany of parathyroid origin. Tetany in parathyroidectomized dogs was shown

by MacCallum and Voegtlin to be constantly associated with a disturbance in calcium metabolism, and that tetany could be absolutely controlled by the administration of calcium as well as of parathyroid preparations. Calcium has been utilized clinically in tetany following thyroidectomy. In infantile tetany the reports are rather against its value. Blepharospasm and other tics are frequently improved. Berkeley reports eighteen of twenty-six patients suffering from paralysis agitans improved by prolonged treatment with parathyroid. The tetany of pregnancy and lactation has been ascribed by MacCallum to abstraction of calcium from the maternal tissues by the fetus, and this theory has been carried further by Drennan who also ascribed the tendency to dental caries and osteomalacia under these circumstances to the same cause. Various hemorrhagic conditions, particularly when associated with delayed coagulability, have long been successfully treated with calcium.

NEURO-SURGERY.

NEURO-SURGICAL CEREBRAL LOCALIZATION. C. K. Mills' rules for operations.

1. In operating for prefrontal tumors higher physical symptoms should be the chief guide, and, in the case of the left hemisphere, agraphia and aphasia, the opening in such cases always being anterior to the main extent of the motor region.

2. In all operations for brain tumors with dominating motor symptoms, the opening of the skull should be made so that the correlative brain exposure will be three fourths in front and one-fourth behind the central fissure, the base of the flap being perpendicular to the lower end of that fissure.

3. In operations for tumors having symptom-complexes in which disorders of the muscular sense and astereognosis are dominant, the opening in the skull should be so made that the cerebral exposure will be three-fourths behind and one-fourth in front of the central fissure.

4. When oculomotor symptoms, such as abducens paresis, lid drooping and nystagmoid movements are present with symptoms pointing to the parietal lobe, the operation should

be parietal or parietooccipital, it being recognized that the interference with eye movements is not basal, but probably due to disturbance of the visual motor cortex.

5. When object blindness in any of its forms is the central feature of the symptomatology, operation should be done with a view of exposing the lower temporo-occipital convolutions.

6. When relative or absolute hemianopsia or hemiachromatopsia or both are the most important symptoms, the operation should be with the view, if possible, of reaching the mesotentorial surfaces of the occipital lobe.

7. When forms of literal or verbal blindness are the central features of the syndrome, the angular gyrus should be the focus of the exposure.

8. Similarly, when verbal deafness is the deciding symptom the posterior extremities of the first and second temporal convolutions should be the objective points, while for uncomplicated verbal amnesia the midtemporal region should be exposed, and for note deafness or amnesia, the anterior temporal region.—*From Proceedings Philadelphia County Medical Society.*

NEUROPATHOLOGY.

ANGIOSPASTIC GANGRENE.—Dr. H. Bender (*Deut. Zeit. f. Nervenheilkunde*, Vol. XLIII, Nos. 1 and 2).

In this very interesting and complete summary the author discusses the various theories as regards the etiology, symptomatology and mechanism of production of angiospastic gangrene and reports a clinical case, which showed an onset with pain, disturbances of sensibility, cyanosis and necrosis. The gangrene he believes was due to an anemia in addition to the vascular alterations. He gives a full discussion of the anatomy and physiology of the sympathetic system in relation to the case reported. He believes that a hemorrhage of the spinal cord limited in size irritated the vasomotor centers, and as the result of secondary changes in the spinal cord, there originated secondary vasomotor changes which were in part paralytic and in part irritative.—*Excerpt by Dr. J. J. McPhee and Smith Ely Jelliffe in the Post Graduate.*

PSYCHOPATHY.

AMERICAN SUICIDES IN 1911.—Suicides for 1911 were 12,242 and 12,608 for 1910. The proportion for men and women varied but little. Professional men and physicians head the list, the number being 27, as compared with 51 in 1910, 27 in 1909, and 42 in 1908; clergymen come next, 11 having taken their own lives in 1911. The causes were despondency, 6,114; unknown, 1,480; insanity, 1,052; domestic infelicity, 1,208; ill-health, 1,343; business losses, 153; liquor, 204; disappointment in love, 733. The methods employed were shooting in 4,151; poison, 3,450; hanging, 2,054; drowning, 984; throat-cutting, 694; asphyxiation, 646; also occasional jumping from roofs, in front of trains, burning, stabbing, dynamite, starvation and self-strangulation, etc.

NEUROPHYSIOLOGY.

THE CAUSE OF SLEEP.—The July number of the *St. Louis Medical Review* has this excellent editorial summary of this always interesting subject.

Durham performed some experiments in 1860 that proved the cerebral circulation is diminished during natural sleep. He trephined a dog and inserted in the trephine opening a watch crystal, sealing the edges hermetically to exclude the complication of external air pressure. When the animals operated on were awake, the pial vessels were seen moderately distended with blood, and the circulation was active; but during natural sleep, the brain retracted and became pale, so that the contrast was most remarkable.

Now Flint and some other physiologists assert that the cerebral circulation is under vaso-motor control, while Osler and other writers declare it is not. If it is not how is sleep brought about?

The most tangible explanation of the phenomenon of natural sleep is offered by Sajous. Sleep, says Sajous, is brought about by the sympathetic centre in the posterior pituitary body sending constrictor impulses to the anterior pituitary

which governs the function of the thyro-adrenal system; the effect is a diminution of the internal secretion of these glands, and thus a lowered metabolic activity, which permits general vaso-dilation. The blood accumulates in the splanchnic and the large trunks, cerebral anaemia being one result.

Fleming found by experiments on himself that pressure on the carotid arteries produced prompt sleep. A well recognized cause of obstinate insomnia is high blood pressure.

Fatigue and sleep both have a physical basis. Injection of the blood from a fatigued animal into a normal animal at once produces all the signs of fatigue in the latter. Exercise produces fatigue-products in the blood, as does functional activity of all the organs, and these fatigue-products affect the nerve cells of the pituitary gland. When sleep follows fatigue it is certain, says Flint, that the supply of blood to the brain is considerably diminished; and the only explanation for this is that in some way fatigue-products in the blood affect the vaso-motor system. The necessity for sleep is represented by certain degenerative structural changes that have taken place in the nerve cells of the brain.

Thus it appears that all authorities are agreed that sleep is a matter of vaso-motor control, and every theoretical and clinical observation corroborates that view.

Sleep is preceded by general muscular relaxation normally, though soldiers have been known to sleep while on long forced marches. Warmth to the feet or warmth applied to the whole body is well known to invite sleep; it does so through vaso-motor relaxation. Prolonged exposure to severe cold may induce an irresistible desire to sleep—a sure forerunner of death by freezing; this sleepiness is explained by the failure of vaso-motor reaction, the blood accumulating in the splanchnic area.

Every drug we use to produce a hypnotic effect causes a derivation of cerebral blood to some other part of the body. Splanchnic accumulation of blood also explains the drowsy effect of a hearty meal.

CLINICAL NEUROLOGY.

THE CORTICAL PORTION OF THE SUPRARENAL CAPSULE; ITS PHYSIOLOGICAL AND PATHOLOGICAL RELATIONSHIP TO THE BRAIN AND REPRODUCTIVE GLANDS. WHEN TO SUSPECT SUPRA-RENAL TUMOR.—The medullary part of the suprarenal capsule has received much attention from various experimentalists on numerous occasions but the author finds that the cortical part has also an important role in the human economy. Atrophy of this part is nearly always present in anencephaly, hypertrophy on the contrary is met with in numerous cases in hypertrophic sclerosis of the brain. Tumors of the cortical part of the capsule give rise to a syndrome characterized by (1) premature development of hair on the pubes and in the axilla and the formation of long hairs on the cheeks and chin in young girls and increased development of hairs on the chest, back and limbs; (2) general adiposity; (3) troubles of the genital functions, premature appearance of menstruation and sexual desire and after puberty cessation of the menses and disappearance of sexual desire, after the menopause, metrorrhagia. When this syndrome exists the author considers it is possible to suspect a suprarenal tumor, formed histologically of the cortical elements but its position is still uncertain as tumors in any part of the abdomen, in the true pelvis, in the ovary, testicle, kidney will also give rise to the same syndrome.--Aikins, Clarkson, Boefny, O'Reilly and Harrison Excerpts in *Can Prac. and Review*.

NEURO-DIAGNOSIS.

UNEQUAL PUPILS IN PULMONARY DISEASE.—Sergeant, in *Progres Medical* notes the association of pupillary inequality and tubercular pleuro-pulmonitis. When continuous this symptom without change in iris reflex a tuberculous pleuro-pulmonary affection must be considered as probable. This pupil sign may be independent of syphilis and due to tubercular fibrosis. The author enjoins diagnostic caution here as to conclusion of tabes or paresis from this eye symptom even though syphilis is concomitantly discovered.

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Any Comment, favorable or unfavorable, specifically set forth, is always welcome from friend or enemy or any "mouth of wisest censure."

CHAS. H. HUGHES, M. D., Editor and Publisher.

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EDITORIAL.

[All Unsigned Editorials are written by the Editor.]

THE BLOOD OF THE FATHERS is a play in four acts dealing with the heredity and crime problem. By Dr. G. Frank Lydston.

This is the story of Dr. Gilbert Allyn, son of a New England farmer, who receives his medical education at a well known New York medical school. After his graduation he spends several years as resident interne at the public institutions at Blackwell's Island, serving for the greater part of his internship as resident surgeon at the penitentiary. While here he becomes interested in the scientific study of the degenerate classes, particularly the criminal. He discovers that the criminal often is more sinned against than sinning, and that

every social system is primarily responsible for its own criminals. After careful study and observation he becomes convinced that the average criminal is morally delinquent merely because physically defective. He concludes that behind the physical defects lie such causes as bad heredity—involving lack of marriage control—poverty, improper education, lack of physical and moral training and in general a vicious environment.

The young doctor is ambitious to accomplish something useful to the world outside of the ordinary routine of medical practice and selects criminal anthropology, made famous by Lombroso and his school, as the field best suited to his humanitarian objects and which gives the best promise of fruitful results. The specialty of nervous and mental diseases, being more closely interwoven than any other with the field of degeneracy, appeals to the young doctor as best suited to his scientific ends. He therefore selects neurology as his special field for strictly medical work.

Then follows a well written record of adventure, romance, tragedy, femininely glossed hereditary depravity, mismated, non-eugenic matrimony in one, directed unrequited affection in another, the hero marrying a recovered patient, when according to the merits of the worthy nurse he ought to have married her, the marriage ending in the wife's remorse over a great theft and cyanide suicide and the husband's final realization of his mesalliance inborn with a wife of latent vicious aptitudes and heredity—the father having been a thief and the mother an opium eating suicide.

The moral of this meritorious book is that we have to be educated to believe that it is cheaper to prevent than to cure, which is the substance of Dr. Allyn's remark on p. 126, a rejoinder to Maxwell's trite observation on the dual conduct of certain men.

WHO SHOULD MARRY?—At a recent meeting of the City Hospital Alumni Association of St. Louis, medical men, laymen, a priest and a rabbi engaged in a mixed discussion of pre-nuptial eugenic pre-requisites, the clergy maintaining especially for environmental, moral and mental sanitary conditions and physicians contending for normal diatheses and exemptions

from grave and especially contagious disease as well.

Lately (May 4th) a man apparently morbid, matrimonially imperatively impulsed, presented himself for the fifth time within a short interval to the county clerk for a marriage license, each time bringing a different woman with him.

Each time being refused by the county clerk on the ground of mental and pecuniary incapacity, the man appealed to the circuit court, threatening if not allowed to marry, to abandon the Republican party and join the prohibition party. At this writing (May 6th) the court had not yet decided the case. In these matters of pre-matrimonial sanitary eugenics the question is, who and how to decide what legal regulations should be made in regard to this important matter.

We must have opinions here and aim to be right. It is obvious that many safeguards are essential to accomplish justice and personal and public weal and guard against mistake and wrong in our decision and the decision of even the profession of medicine in the premises.

DEATH OF DOCTOR TAYLOR.—The Medical Council announces the death of this brave and devoted man in the field editorial. He fell on the firing line fighting manfully as in the beginning of his useful career.

For over two years Dr. Taylor had suffered from cancer of the tongue yet he, like General Grant, kept faithfully at his chosen work.

Dr. Taylor was born in Indiana, November 24th, 1853. He was gentle, yet firm and steadfast of nature, brave, determined, persevering and energetic. In the shadow of death he was faithful, true and determined as he wrought in the Valley whose end was the grave. From a psychologist's view, the "elements were so mixed in him that all the world might stand up and say, 'there was a man.'"

There will be no change in the business management of the Medical Council. The efficient business organization that Dr. Taylor built up will continue unchanged under the general direction of his widow, Mrs. J. J. Taylor, and the special management of Dr. Thomas S. Blair.

We extend our sympathies to the bereaved widow. She

has lost much but he has left us the legacy of an example worthy of all emulation.

THE NOGI SUICIDES AND INSANITY.—The amateur and pseudo alienist not duly considering the normal influences of custom and environment upon the mind, from without the brain, to influence the reason and emotions, might conclude that these suicides were the result of insanity. But what is insanity in one case or under certain circumstances and environment may be sanity in another.

The child thrown into the Ganges, the Indian wife who follows her dead husband through fire (or did) to the life beyond, the crucifixions of the Moki Indians and the cruel and bizarre conduct and customs of other North and South American Indians, according to tribe usages, though having to civilized eyes the appearance of pathological abnormality, as African cannibalism has, can not be classed as acts of insanity. These singular and startling deeds as they appear to civilization are in conformity with custom of mental habit in these racial or tribal minds.

They differ from our civilized conception of proper, sane action or thought but they are natural to the particular peoples displaying them. They conform to the normal mental character of the race or individual.

Whereas insanity is a morbid and abnormal departure from the natural habit of thought, feeling or action of the individual from disease involving the brain, causing mental aberration in the individual as compared with his natural self. In short insanity is a brain disease causing change of character in the particular individual. It is not solely the result of racial or social or other convincing influences upon the mind from without the brain, causing a change in the judgment, conviction or impulse, speech or conduct.

Though it may be said that "custom doth men's reason overrule and only serves for the fool," there are, as Carlisle noted, many fools in this peculiar world of ours. Yet the foolish are not by any means all lunatic, nor are men who may be induced to do foolish and unwise acts or make foolish speeches either natural fools or insane.

ERRONEOUS ESTIMATES CONCERNING CIRCULATION RATING OF MEDICAL MAGAZINES is a common mistake of advertisers, such as consider a medical periodical's advertisement value by the aggregate number of subscribers, indifferent as to the class and purchasing competency of readers and the magazine's influence. For instance a small, cheap and very often issued journal may go largely to those who pay little attention to the advertising pages, while a well sustained, higher priced magazine, though less frequently issued, may go to a fewer number of subscribers, but to more thorough and pecuniarily more competent purchasing sources, as to libraries, hospitals, eugenic homes, societies, etc., and be preserved for often reference, as the quarterlies are. The monthlies and weeklies may have larger subscriptions and give away lists as they usually do but most of them do not have so many readers to a number, nor such a persistent reading and magazine saving class.

So that the mere numerical answer to the question—"What is the number of your subscribers?" does not convey the exact value of the paper or magazine as a remunerative advertising medium. A magazine may circulate over the entire globe and in every state in the American Union, as the *Alienist and Neurologist* does, and not have sent more than from seven to ten copies to a continental city, as the *Alienist and Neurologist* does to some foreign cities, in addition to its home support, and yet have exceedingly valuable space in its pages for appreciative advertisers, as the *Alienist and Neurologist* has, as the number of long staying advertisers attest, knowing besides, the *Alienist and Neurologist* knowingly takes no untruthful advertisements. Honest, truthful advertisements are essential for advertising space in its pages—as essential as only pure food and true medicine announcements are.

THE HOSPITALS FOR THE INSANE are of late very commendably showing photo-reports of their interiors as well as of the exterior and environments of buildings. One report before us, that of the State Hospital at Warren, Pa., shows the art class at work as well as the picnic ground and lakes with the patients enjoying same. These and the dining, living and sleeping room interiors, the duck pond, farm colony and conva-

lescent quarters make a good impression on the public. Many of these features of the modern hospital for the insane are well shown in the enlightening and always welcome reports of other hospitals coming to us. All of them show beautiful grounds, many show their libraries and culinary departments, play grounds, gymnasias, assembly, work and amusement places to their best advantage.

But the interior of the wards or halls of all of them, with their sewing rooms, amusement and dance rooms and chapels, lecture and moving picture show rooms should be made known to the public constantly in order that the ignorant may be enlightened and learn that the terms asylum and prison, often ignorantly applied to these curative homes for the mentally maimed, no longer apply. Bedlams are only memories of the dead past that buried long ago its dead. The modern hospital for the insane to-day is memorial of to-day's advancing psychiatry.

The present day insane hospital reports ought to be sent to every newspaper and legislator in the land to dissipate ignorance too often held by these and those.

THE MARCH OF ALCOHOLIC MIND DECADENCE.—“The population increase,” says Leslie's Weekly, quoting from Dr. F. H. MacNichol's paper before the last meeting of the A.M.A., “has been 300 per cent, while the increase in insanity and feeble-mindedness, according to the recent census, has been 950 per cent. Most of this degeneracy is due to the chronic and excessive use of alcohol and narcotics in one form or other.”

“It is the children of drinking parents who suffer most.”

This is the fatal verity of biologic science. How long can this ratio of mental retrogression go on in this once fair and yet fairly temperate land before alcoholic mental decline makes its irreparable, ineffaceable mark on our national character, as it is now making on individuals, to maim and mar them and their posterity forever?

THE PSYCHOPATHIC EFFECT OF A PRETTY DOLL on a child not too sick to enjoy the play thing, discounts the microbic

danger of playing with it, even for instance, if each particular doll in a hospital is not aseptic. The right way to meet the remotely possible septic danger is not to take away dolls from sick children in hospitals, but to asepticise the dolls, giving the child a salutary object lesson for possible future benefit, if old enough to take notice for remembrance. Children may learn about asepsis about as early in life as they learn of the dangers of fire, which a burnt child early learns to dread.

THE AEROPLANE OR FLYING MACHINE IDEA is known to be an old one, even ancient. Forty years ago it so pre-possessed the brain of an insane Missourian, that after attempting to fly with out-stretched arms and a cloth mantle used as wings and getting a severe fall in consequence, from his barn to his dung heap, was brought to us for saner reflection and treatment.

Kiernan records in the August *Alienist and Neurologist* of "Scheming John," the brother of Thomas Gainsborough, who was always trying to invent "something or other," how he attempted a flying machine of the wing variety, such as Samuel Johnson makes note of, as a prevailing conception and a possibility in Johnson's day, when his *Rasselas* was written under the stress of his then great poverty.

The insane often color their delusions with prevailing novelties of invention as they pass from the normally imaginative to the abnormally delusive in mind. The wireless was anticipated by a patient of the editor at Fulton.

EXTENSION COURSE IN NEUROLOGY AND PSYCHIATRY. A commendable feature in advance medical education is this course added to the usual curriculum of some of our colleges. Some of the St. Louis Medical Schools are contemplating such a course and Fordham University School of Medicine in New York has already added such a course.

JAMES G. KIERNAN, THE EMINENT MEDICAL CYCLOPOEDIST, contributor to the *Alienist and Neurologist*, whose meritorious contributions have graced the pages of this magazine for so many years, winning such appreciation from our many readers,

calls out a special appreciation for his May article, "Is Genius a Sport, etc.?"

The eminent Professor, B. F. Turner of Memphis, writes an additional two page comment well worthy to be read as an addendum to Dr. Kiernan's valuable contribution. It is gratifying to see such and to receive by letter, as we often do, appreciation of our pages and authors. In this connection the contributions of Smith Ely Jelliffe and all the other writers, Briggs, Waugh, Baer, Hughes, Crothers, Barr, in late issues have been mentioned from many sources. In fact few numbers have escaped such favorable criticism, even older issues, from the foundation of this magazine.

A CLERGYMAN'S TRIBUTE TO MEDICAL PROGRESS.—A clergyman of Atlantic City, now chaplain of the Red Cross Society, was impressed at the time of the last June meeting of the American Medical Association in that city by the sea and was moved to remark that: "The dominant activities of the age in the fields of research and conquest are nowhere more marked than in the professions of medicine and surgery."

"What visions of progress do such words as these mean: Bacteria tests, the Roentgen ray, aseptic surgery, anti-toxins, specialism, the profession of nursing with its intelligent attention to and record of the patient?"

What would be this clergyman's state of mind if he knew of the present day demonstrable phagocytic power, the opsonic index, the wonderful metabolisms of the organism, the multi-form reflexes, the impressed and impressing psychic neurone centers, etc.? With wonderful psychic clairvoyance peculiar to the clergy in making texts fit foreign subjects, he found an appropriate text in the Pool of Siloam and the five porches of Bethesda.

While this clergyman claims that it is "only the inspiration of the Healing Savior of Bethesda that these wonders are accomplished," Christian scientists would not approve of the baths recommended nor of the clay anointing employed in the healing of blind Bartemeus by the Savior.

These agencies are too material for Christian science healing, which is a spiritual advance upon Christ's methods.

SADISM AND NECROPHILISM.—Atlanta, Georgia, has a sexual pervert who is said to have cut the throats and otherwise mutilated, ravished and killed nineteen mulatto girls within nine months.

In nearly every case this sadist is reported to have cut out and carried parts of the assaulted bodies.

We should like a detailed medical report of this latest "Jack the Ripper."

"The mutilation was evidently done with a surgical instrument and the slayer had some anatomical knowledge."

Necrophilia and pure sadistic sexual passion are nor usually associated in the same perverted lecher.

The record does not say whether this psychopathic pervert was white or colored. He is probably a negro medical student or a mulatto.

St. Louis has a recent mysterious murder that may be due to a sadist or necrophiliac in the case of a Mrs. Calgan, found in the cellar of 2307 Locust street, mutilated and strangled.

THE SAVING FORMALDEHYDE OF COMMON SENSE, is Elbert Hubbard's therapeutic conception of the Decalogue of Moses.

JOLLY, IN THE MUNICH MEDICAL WEEKLY, reports a case of epilepsia from electrical shock in a young motorman who touched a live trolley wire which caused burns, headache and abdominal pains for a short time, but he soon resumed his work. Two weeks later he suddenly became prostrated and unconscious, followed by the usual post-epileptic sleep of grand mal. A few weeks later he had another convulsive fit. Nocturnal attacks followed and confirmed epilepsy and mental deterioration. The shock was caused by from four hundred and fifty to five hundred volts.

The editor of this magazine once, years ago, excited a convulsion by an overcharge of a small constant current galvanic battery he was using on an epileptic, positive to right forehead, negative to nucha, but only once and never since, though he has repeated the treatment many hundreds of times since.

PROFESSOR DR. H. STRAUSS OF BERLIN lectured at the New York Post-Graduate Medical School and Hospital on October 12th, 14th, and 15th, on diseases of the stomach and kidney. Professor Dr. Carl von Noorden, Physician in Chief to the City Hospital, Frankfort, Germany, delivered a series of lectures on the pathology and treatment of diabetes, radium therapy and arteriosclerosis at the same place, on October 28th to October 31st, inclusive.

"WHY WE LISTEN TO CRICHTON-BROWNE.—The New York Morning Telegraph says—A most esteemed contemporary in our city about the time the sun sets is mystified at the publicity given to the utterances of Sir James Crichton-Browne. That celebrated physician has recently given forth a few obiter dicta on the matter of first love, and his utterances follow hard upon the mathematical platitudes formulated by the eugenicists, or the apostles of the perfect marriage. Our solar monitor says, somewhat querulously, we think: "The fact remains, however, that whether he happens to be dealing with love or politics, diet or eugenics, literature or strong drink, Sir James possesses in a supreme degree the mysterious knack of securing a public hearing for his slightest reflections."

Now the reason that Sir James Crichton-Browne is so readily listened to is not far to seek. He brings to the problems of medicine the precious qualities of a great and broad understanding and a large, humane and kindly heart. He cannot even spell the word "cant."

HONORS FOR COLONEL GORGAS.—Johns Hopkins has recently conferred LL. D. on Colonel and Assistant Surgeon-General Gorgas, chief sanitary officer of the Isthmian Canal Zone. Honorary degrees have also been conferred on him by the Universities of Pennsylvania and Harvard, well deserved.

THE DEATH OF PRESIDENT THOMAS DOLIBER, on June 5th, 1912, has taken away one whose business career covered a period of nearly sixty years. He was the founder of the Mellin's food business in North America and for nearly forty years devoted his time and energies to its conduct and successful

promotion. He was an estimable man in all business and personal relations and will be greatly missed by all who sustained social or business relations with him. He was honest and square in all his dealings and a benefactor in the special food he put upon the medical market for children, the aged and the dyspeptic.

DR. TOM A. WILLIAMS has removed to 1705 N Street, Northwest, Washington, D. C.

DR. T. D. CROTHERS ON MEDICAL COLLEGE EDUCATION as presented in his *Forecast of the Evolutions and Revolutions of Medical Education* has attracted much attention, as we learn from extracts like the following from his last November contribution to the *Alienist and Neurologist* part of which we cull from Clinical Medicine.

Dr. Crothers finds the present transitional movements involved with confused theories, based on tradition, credulity, and dogmatic conceptions. Certainly, much of the work of today is far behind its requirements. Even with palatial equipments and endowments and in the face of general education of the people, there remains a gap between actual and possible attainments.

In medicine, special lines have crowded out general study. The new is considered complete, and specialties crowd the curriculum. The student is overtrained in these—confused, bewildered, uncomprehending. The scholastic methods reduce all to a level of skepticism, credulity and egotism. The student in real life must unlearn most of what he has been taught. The diploma has lost its significance—in reality, it stands simply for a period spent at college; little more. Our political examining boards evidence the failure of colleges to turn out finished physicians.

The A. M. A. Council seeks to force colleges to higher levels. The Carnegie Board classified the colleges according to some fixed theories. Like all efforts labeled "advance," this one was welcomed, on the assumption that it was wisely directed and might do good by breaking down weak schools and strengthening the strong. But instead of proving practical and *e*-volutionary, it turns out to be *re*-volutionary. The

small schools seem weak and deficient, the large ones dogmatic—"scholastic stupidity and faults loom up in startling proportions."

The small institutions can be improved; the large, with their steam-roller methods and traditions, regardless of the needs of the day, present difficulties. Admission requirements are startlingly faulty: college training develops parrot-like culture, depending on memory; fact collection, unusable and burdening the intellect. To the untrained, uncultured product, a political board presents questions the answers to which determine right to practice, and presumably his fitness.

Then comes disillusion. The college stock does not fit the actual needs. Practical work has to be learned again, after all the best years of the man's life have been wasted in learning things that he finds as useful as the differential calculus is to the cowpuncher or Sanscrit to the foreman of a gang of street-cleaners. The impetus of divine youth has ebbed, egoism has developed, and a surfeit of knowledge has quenched thought and narrowed observation. Professional and humanitarian ideals of duty and responsibility are dimmed, and replaced by greed, selfishness, commercial debasement or the sense of scholastic separation that creates a gulf between the man and the people.

In the smaller college the student escapes this peril; he is starved rather than surfeited. The craving for advance is aroused in him, which is apt to carry him to a higher level, while he is also held closer to the practical needs of his work and to the masses of the people of whom he remains one.

Medical Colleges need practical courses that will supply with pure pabulum and strength for their brains and not bring on premature psychasthenia by teaching processes and methods that cram and overtax.

Students of the present day especially in the junior and senior years are over crammed at the expense of normal thought and clinicological reasoning, deliberation and power of the therapeutic consideration for the welfare of the patient. Who among us today would wish to be forced through the mentally overstraining and unhygienic ordeal? With our own we are psychically unsanitary and depressing in the college curriculum.

We overwhelm with too much detail and too little logical deduction and generalization. We pile Pelion upon Ossa and Ossa on Olympus and bury the student under the weight of both and expect the student to come out from under smiling and buoyant and ambitious for a post-graduate course.

MR. HENRY L. HUGHES, having severed his official connection with the *Alienist and Neurologist*, address all communications and remittances to the editor, DR. CHAS. H. HUGHES, 3858 W. PINE BOULEVARD, ST. LOUIS.

Our best wishes go with him in his new relations.

AN ESSAY ON HASHEESH, INCLUDING OBSERVATIONS AND EXPERIMENTS. By Victor Robinson, Contributing Editor *Medical Review of Reviews*, etc. New York, N. Y., *Medical Review of Reviews*, Publishers, 1912. Price 50 cents.

This book gives the pharmacology, effects of hasheesh, culture, method of collection, physiological effects, therapeutics, medicinal and toxic uses, and methods of contracting the habit. The author characterizes cannabis indica as the "coquette of drugdom."

The author's physiologic experiments are given and concluding opinions.

THE ATTEMPTED ASSASSINATION of Ex-President Roosevelt by a demifous ex-saloon keeper under suggestion of grievance, a grudge and a dream, will set the people once again to thinking about the safety of our great public statesmen. Pseudo alienists will pronounce hasty conclusions of over-powering extenuating insanity for the assassin Schrank, the vicious, revengeful would-be murderer—but unwisdom of conduct and judgment are not insanity, nor are sanely purposed and comprehended conclusions necessarily cerebro-mental disease. To be a truly insane act, the deed must be the product of brain and mind disease impulsion.

This tragedy, the recent murderous attack on Mayor Gaynor of New York, the killing of three out of the last nine of our Presidents, must cause solemn reflection by all Americans upon conditions which make it possible, as President Taft

says, that "such dastardly deeds may occur in a country affording its citizens such complete advantages of civil liberty."

But what care these beastly, vicious degenerates for the advantages of civil liberty, except to take advantage of the blessing as a beastly, riotous license, believing the first perilous misleading platitude of our prerevolutionary declaration of independence, taken without its glorious and politically right proclaiming context to be an abstract truth that all men are equal, failing to understand the politically qualifying sentence as to the inborn rights to life, liberty and happiness.

John Schrank, the assassin, until a short time ago had a saloon at 370 East Tenth Street, New York City. He is a bald headed man, thirty-six years old. He was born at Erding, Bavaria, near Munich, and came to this country with his parents when he was nine years old. He has been in the saloon business as employe or proprietor nearly all his life. He quit business, he declared, only when it was "revealed" to him in "dreams" that it was his "duty" to kill Col. Roosevelt, September 21st. At that time he left New York City to follow the former President with purpose to assassinate him.

The psychology that would extenuate to exemption from due punishment this premeditated and intelligently executed conscious crime, based upon an ignorant and viciously egotistic grudge and dream, as he now claims, would be more charitable than scientific.

It is probable that the plea of insanity has already been suggested to him, if it were not a premeditated concoction of his own mind. But bizarre conduct without propelling disease is not the sort of insanity which exempts from legal consequence of self-designed and executed crime.

It is gratifying to know that Col. Roosevelt will live to further honor his country by uttering with courage of conviction his characteristically impressive sentiments of patriotism and political eugenics. The country in its present crisis needs more men like him and like Mr. Wilson and Mr. Bryan.

DOCTORS, IF IN DOUBT as to how you should vote in the coming presidential election, consider Colonel Roosevelt's

appreciation of your kind, when he was President of the United States.

No chief executive of this nation ever delivered encomium so high upon medical men as he. This exalted opinion of the profession was shown in his appointments also. He promoted Doctor Leonard Wood till he reached the head of the American Army and placed Col. Gorgas and sanitation to the fore at Panama.

THE PROGRESSIVE PARTY'S PUBLIC HEALTH PLATFORM:—

“We favor the union of all existing agencies of the federal government dealing with the public health into a single national health service, without discrimination against or for any one set of therapeutic methods, school of medicine or school of healing, with such additional powers as may be necessary to enable it to perform efficiently such duties in the protection of the public from preventable disease as may be properly undertaken by the federal authorities, including the execution of existing laws regarding pure food, quarantine and cognate subjects, the promotion of appropriate action for the improvement of vital statistics and the extension of the registration area of such statistics, and co-operation with the health activities of the various States and cities of the nation.”

UNIVERSITY OF MISSOURI, COLUMBIA, has created a chair of Preventive Medicine and has also a department of journalism which might well include incidental instruction on medical magazine management.

REVIEWS, BOOK NOTICES, REPRINTS, ETC.

PSEUDO-BULBAR PALSY, CLINICALLY AND PATHOLOGICALLY CONSIDERED WITH THE CLINICAL REPORT OF FIVE CASES is the caption of a valuable contribution to the literature and clinic records of this interesting subject by Frederick Tilney, M. D., Neurologist to Coney Island, Bushwick and Samaritan Hospital, etc., and J. Francis Morrison, M. D., Chief of Epileptic Clinic, Long Island College Hospital, etc., in the August number *Journal of Nervous and Mental Disease*.

Pseudo-bulbar palsy is an organic disease of the central nervous system, characterized by bulbar symptoms. It is caused by lesions, not in the bulb, but in the higher parts of the cerebrum. Clinically it differs from true bulbar palsy in its sudden or apoplectiform onset, in its irregular, non-progressive course, in its association with spastic hemiplegia, diplegia or paraplegia, in its tendency toward repeated attacks followed by marked improvement, in its retention of the cranial nerve reflexes and absence of amyotrophía (including fibrillary tremors, muscle wasting and reaction of degeneration), and in its long duration and characteristic disturbance of the patient's emotional tone. It is a disease of the upper neurone type, especially involving some of the cranial nerves. The nerves most frequently affected are the hypo-glossal, facial, glosso-pharyngeal and vagus; less frequently, the trigeminus, abducens and oculomotor. Histologically, the nuclei of these nerves are normal; the arcs of their immediate reflexes are unbroken. The delinquencies in the cranial innervation are due, not to changes in the nuclei of the cranial nerves themselves but to partial or complete interruptions of the tracts connecting these nuclei with the cerebral hemispheres, the cerebellum, and perhaps, the tectum of the mesencephalon.

In a typical case the patient is stricken with an apoplectic seizure, losing consciousness during the attack. The resulting paralysis is generally a hemiplegia, involving the face, tongue and extremities of the same side. In the course of the next few weeks these symptoms become less marked, etc.

THE FAMILY DOCTOR.—As it is well at times for us to “see ourselves as others see us” because it “would from many a blunder free us,” we give place to an editorial extracted from the *St. Louis Star*, a *St. Louis City* newspaper, of June 9th, 1910, which is quite apropos now as then.

It strikes us the newspaper took the right view of the situation then and that it is the correct view now. If the Carnegie Foundation had also considered the special needs of the medical profession's clinical and therapeutic schools and endowed them for better practical teaching, helping the weak as well as the strong where he might increase their teaching efficiency the fact would be an addition to his worthy laurels and win for him additional plaudits from philanthropists, and the men who know and apply the needs of the patient in clinical practice as well as in laboratory work.

“So the Carnegie Foundation Trustees want to kill off the old family physician and substitute for him the specialist who sits in his office a few hours a day and makes his patients come to him. This is a fair inference from the criticism they have been making of the medical schools, all except those highly endowed institutions equipped for research and devoted to giving their students a highly specialized scientific education.

“Two things seem quite evident to the mind which takes a common sense view of the situation. One of these is that the majority of persons who intend to spend their lives in general medical practice can not afford the time necessary for this highly scientific education, by which one fits himself more for research and experimentation than for the daily practice of medicine. The other is that if he did so fit himself he would not enter into the daily grind of family practice. The result would be that the genuine physician—the healer, the man who is on tap day and night for a call by the afflicted—would disappear, and the people would have to take their choice

between dying and waiting until office hours in some distant building opened the door of relief.

Experience shows that the highly technically educated man is not necessarily the most successful practitioner. It is just as true of physicians as of artists, that they are born, not made. Technical medical knowledge may be acquired from books, at lectures and clinics and in the laboratory, but the innate ability and the instinctive desire to heal, to use all one's powers and attainments for the relief of suffering, does not come from books nor lectures, nor is it found in chemical laboratories. Better is the old country doctor and his saddle-bags, and healing therewith, than the highest specialized scientist who does not treat the people's ills.

"Doctors we must have, men who go out o' nights, and also men capable of making the most highly specialized research into the origin and treatment of disease. We need them both, but we cannot have them all comprehended in the same personages. They must work together, but the very exigencies of medical practice prevent them from combining in the same individuals. Something of theoretical knowledge must be sacrificed for practical application of it, and on the other hand something of medical practice must be sacrificed for research into the origin and nature of diseases.

"The standards of professional knowledge for students at our medical colleges must be high, especially along the line of the actual treatment of the sick and the injured, but beyond that point let medical men specialize as they are prompted and feel a special ability to do, and let there be institutions equipped for such specialization—the more the better until the full need is supplied. But leave us the family doctor with his ample fund of practical medical knowledge, who cures the ills of the people and looks to the specialists for new light."

RIGHT HOSPITAL ILLUMINATION. Modern Hospital Illumination with Designs, "is an illustrated brochure sent out by an enterprising firm engaged in this line of work in the United States, British Columbia and Canada. The

illumination is a softened, diffused covered in light, throwing its rays from the ceilings of wards and rooms.

It would be much better if lighting methods for hospital wards and rooms could be devised throwing light upwards from the floors at the foot of beds and arranged so as to be turned off from each bed with end ward lights for occasions of inspection or work when patients are not in the wards at night, i. e., empty.

Patients of an entire ward should not be subjected to sleep depriving illumination at any time when they need sleep and this is always liable to be with general ward illumination from ceiling, the reason too obvious to need mention here.

CONCLUSION—It is a good psychiatric maxim that nothing avoidable should be permitted that might in any way disturb the tranquility and comfort of a patient. Sleep robbery of the sick is a serious, though often thoughtless, unintentioned wrong.

The Effect of Specific Treatment on the Cerebrospinal Fluid. By W. F. Lorenz, M. D., Mendota, Wis.

Membraneous Pericollitis. By H. S. Crossen, M. D., St. Louis, Missouri. From *Surgery, Gynecology and Obstetrics*.

A Contribution to the Study of Folie a Deux, with Report of a Case. By William A. Boyd, B.S., M. D., Westport, Conn. Assistant Superintendent the Westport Sanitarium. From the *Medical Record*.

A valuable clinical and historic brief on this subject in psychiatry.

NERVOUS AND MENTAL DISEASE MONOGRAPH SERIES NO. 12.

CEREBELLAR FUNCTIONS. By Dr. Andre-Thomas, (Ancient Interne des Hopitaux de Paris.) Translated by W.

Conyers Herring, M. D., of New York, with 89 figures in the text. New York. *The Journal of Nervous and Mental Disease Publishing Company, 1912.*

This is one of the best of this excellent series. It is largely experimental with enlightening illustrations of biological results. The author considers the term "Kleinhirn" or "little brain" of the Germans applied to this intracranial viscus as "neither justified by morphology, histology nor physiology"

and in this book proceeds by experimental illustration and rational deduction therefrom to disclose his conception of the function of this interesting organ of the encephalon.

Flourens, Munk, His, Babinski, Mott, Nothnagel, Ferrier, Hitzig, Foville, Gall, Sherrington, Gowers, Horsley, Gehuchten and too many others of his predecessors in this interesting research study for mention here are intelligently discussed and his description and conclusions as to the functions and symptomatology of this organ are complete and satisfactorily up to date in confirmation of our present conception and somewhat in advance in certain aspects.

THE JOURNAL OF ABNORMAL PSYCHOLOGY. Editor, Morton Prince, M. D., LL. D., assisted by a scientific coterie of Associate Editors, official organ of the American Psychopathological Association, comes to our table always laden with good matter for the observant and thoughtful. Its contents are always interesting to the psychological student. In the last February and March number is a study by Donald Fraser in Delusion Formation, a case of so-called Alcoholic Amnesia by Albert C. Buckley. Hallucination Induced by Repression by C. P. Oberndorf. Possibilities of a Modified Psychoanalysis by E. W. Taylor, with abstracts, reviews and comments.

Its reviews constitute a specially commendable and eminently meritorious feature, in this number particularly. Professor Bleuler's *Kritische* of Freud's Psychoanalysis, Albert Salmon's *Function of Sleep*, by Coriat and the *Greenwood-Arnold's Physiology of the Special Senses*, reviewed by Prof. William D. Tait of McGill.

HEALTH DEPARTMENT CITY OF ST. LOUIS, MISSOURI. Statement of vital statistics, communicable diseases, coroner's inquests, meteorology, etc., for June, 1912. Max C. Starkloff, M. D., Health Commissioner, Max Kaufman, Clerk to Health Commissioner and Board of Health. This report makes an excellent exhibit of good and diligent sanitary work done in chemical, pathological, biological, microscopic and serum tests, spinal punctures, warnings and remedies.

The screening and the anti-spitting ordinance, the latter the original suggestion of the writer while on the Board of Health, having been well looked after, as well as the water and milk supply, and the examination of supposed hydrophobic dogs' brains, resulting in eleven positive and eleven negative, and one hundred and fifty dogs held for home and hospital observation.

ON THE PHYSIOLOGY OF THE SEMICIRCULAR CANALS AND THEIR RELATIONS TO SEASICKNESS by Joseph Byrne, A. M., M. M., LL. B., New York, J. T. Dougherty. London, H. K. Lewis.

This is a painstaking and quite exhaustive examination based on personal experiment of an interesting subject to voyagers, physicians and psychologists, giving also an extensive bibliography, together with a lengthy list of authors referred to on the semi-circular canals.

The author also details his personal medical observations on shipboard in several vessels, the chemical and physical tests he made, treatment, suggestions, etc., with schematic diagrams and other information of value as to his conception of the vertigo, nausea, etc., of this peculiar condition of sea travelers. The entire text and the tests here recorded with suggestion on the therapy of travel will interest the student of this subject as well as the alienist, neurologist and general practitioner. Further notice may be found in Neurotherapy of our Selections department.

THE SHAKESPEARE MYTH by Sir Edwin Durning, Lawrence, Bt., is the most convincing expose of the "ignorant householder of Stratford's spurious claims" to the authorship of the plays so long attributed to Shakespeare that has come to our notice.

Criticism of Stedman's New Medical Dictionary. By John A. Phoustanos, M. D., Editor of IATPIKH IIPOOAOZ and La Grece Medicale. New York, 1912. H. Stamis, Greek Printing Office.

THE BORDERLAND BETWEEN MEDICINE AND SURGERY by Roland Hill, M. D., C. M., St. Louis; from the New York Medical Journal. This is a valuable paper which every surgeon and physician might read with profit and especially physicians who attempt neurological therapy as all should. Neurology is too diffuse a specialty to be confined exclusively to neurologists. We endorse the author's views in the main and especially concerning the Gasserian ganglion in connection with trifacial neuralgia and thyroid excision for exophthalmic goiter.

COCAINE, OPIUM AND THE HEALTH BOARD.—Since the Health Board of St. Louis is endeavoring to stop the sale of toxic habit forming drugs, we hope then unfortunate victims will be charitably considered and the inveterates allowed to taper off with wise dispensary substitution sustaining treatment, allowing a little of the "of the hair of the dog that bit them" to alleviate their misery.

They are not fiends. They are victims of ignorance, circumstances and bad nervous organizations that cannot of themselves alone break the ruinous habit. Once in the thralldom they cannot unaided break their neuropathic chains, for these drugs are disease producers as well as disease alleviators.

When these drugs are suddenly taken out of their systems the habit victims show abnormally. They appear at their best when the drug is in them, except the alcoholic who appear at their worst when they are full of liquor.

St. Louis and every large city should have special hospitals for the detention and treatment of these unfortunate creatures and no policeman's diagnosis with clubbing accessory should go with or begin the treatment. The heads of refractory persons under arrest should not be struck anyway.

Announcement of the School of Journalism, 1912-13, Columbia, Missouri.

Preliminary Paper on Some Unfamiliar and Some New Periosteal Reflexes. A. Myerson, M. D., St. Louis, Mo. From the *Archives of Internal Medicine*, 1912.

Transactions of The Academy of Science of St. Louis.
Vol. XXI. Nos. 1, 2 and 3.

The Daniel Baugh Institute of Anatomy of the Jefferson Medical College of Philadelphia. History of its Foundation, Building and Adaptability to Teaching Anatomy. Dedication exercises. Philadelphia, 1912.

This is an up-to-date surpassingly conveniently and antiseptically arranged and constructed institution, and honor to its benevolent founder and its staff of instructors.

Programme Forty-third Annual Meeting, 1912. The American Medical Editors' Association met at the Marlborough-Blenheim Hotel, Atlantic City, N. J., June 1st and 3rd, enjoying a splendid programme and social reunion and banquet.

First Reviews of "Obscene" Literature and Constitutional Law, by Theodore Schroeder, are in the main commendatory. Mr. Schroeder is right for maintaining for the dissemination of the truth to those who can hear it.

Berck-Sur-Mer: a City of Hospitals for the Treatment of Bone Tuberculosis. Alexander E. Horwitz, A. M., M. D., Visiting Orthopedic Surgeon, City Hospital, St. Louis. *From the Journal of the Missouri State Medical Association.*

The National Association for the Study of Pellagra. Second Triennial Meeting, Columbia, S. C., Oct. 3 and 4, 1912, was one of exceptional scientific and clinical enlightenment contributed to by the most eminent and instructive experts on this subject of our own land, Italy and other foreign countries.

Sea-Sickness. By William A. Boyd, B. S. M. D., Assistant Superintendent, The Westport Sanitarium, Westport, Conn. A paper of good analysis and suggestions.

Civitas. The Romance of our Nation's Life. By Walter L. Campbell of Youngstown. Published by G. P. Putnam's Sons in New York and London. Is a book every patriotic lover of liberty and fair play rightly free government should read.

It is a faithful though poetic picture of the political party oppression and growing tyrannies of our time.

A Preliminary Report; Etiology, Pathology and Treatment of Pellagra; a new Theory, a Specific Cause. By George C. Mizell, M. D., P. H. D., Atlanta, Georgia. Formerly Associate Professor of Physiology and Gastro-Enterology of Atlanta College of P. & S., etc. From *Journal-Record of Medicine*, Atlanta, Georgia.

The author maintains that Pellagra is a disease due to eating semi-drying oils in quantities that cannot be normally disposed of, in which case they are deposited as fat foreign to the human organism and in their final disposition by oxidation there is developed a series of end products that act in a deleterious manner upon all the cells and intercellular tissues of the body.

The chief ones of this group are oil of maize, oil of sesame, and oil of cotton seed. By preventing the formation of these products the occurrence of the disease is prevented or the progress stops.

The American Association for Study and Prevention of Infant Mortality. Facing the Facts of Infant Mortality.

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The American Association for Study and Prevention of Infant Mortality is one of the results of the conference on Prevention of Infant Mortality, held by the American Academy of Medicine at New Haven, November 9-10, 1909. The Association was organized at the close of that meeting, and in January, 1910, an office was opened in Baltimore, from which the work has since been directed.

The objects of the Association are:

The study of infant mortality in all its relations and the dissemination of knowledge concerning the causes thereof and to reduce it.



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Vol. XXXIII.

AUGUST, 1912.

No. 3.

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Psychiatric Security in General Hospitals - -Immigration Sanitation Eugenics— The Chief Reason for Divorce—If Reverend Richeson—The Shakers That Killed—The Association of Neuropathologists—Personality in Professors—Nine Years Forced Feeding—Advance in Sanitary Ideas— Safety Matches and Matrimonial Eugenics—Physicians' Approval to Pre- cede Marriage—The Titanic's Medical Heroes—Medical Science and Sanitation at Panama—Coffee and Divorce.	344
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REVIEWS—Continued.

ency—Nouveaux derives sulfures permettant d'administrer les arsenos sous forme soluble, par voie intramusculaire ou sous-cutanne—Life, Mind and Matter—A Comparison of Personal Characteristics in Dementia Praecox and Manic-Depressive Psychosis—Abhandlungen aus dem Gesamtgebiete der Kriminalpsychologie—Saunders's Books, Medical, Surgical and Allied Subjects—Further Studies on the Bacillus Bronchicanis, The Cause of Canine Distemper—Three Months of Life for One Dollar is Cheap—An Operation for Severe Grades of Contracted or Clawed Toes—University of Pittsburg—The Relation of Practices to Individual Differences—Arsenic et Syphilis—Ueber die Sexuelle Konstitution und Andere Sexual-probleme—Lithopedion—Die Ursachen der Jugendlichen Verwahrlosung und Kriminalitat—State Control of State Hospital Libraries—The Evolution of the Operating Table—Fatigue—The Training School.

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The Prompt Effect—The Chlorosis of Young Girls—As it is Generally Accepted that Milk Should Not be Given During the Acute Stages of Diarrhea—Hay Fever Hints—Tilden & Co.—An Ideal Laxative—Dr. Wiley's Gone Away.

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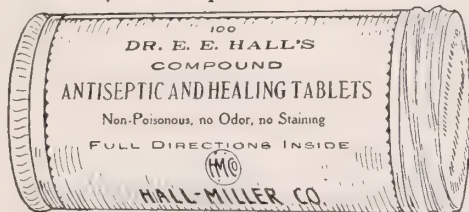


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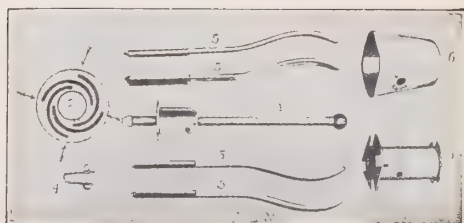
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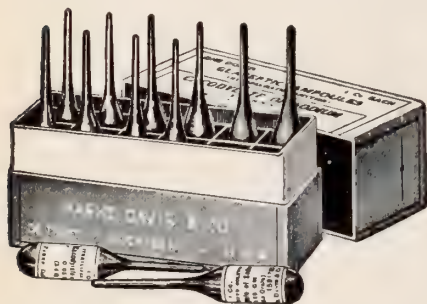
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